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ABSTRACT

Designed to provide background information for a study of higher education in California to be conducted by the Organization for Economic Cooperation and Development, this report describes the essential elements of the system. Section 1 provides an overview of California, postsecondary education in the state, and higher education agencies and associations. Section 2 discusses master planning for higher education prior and subsequent to the development of the "Master Plan for Higher Education in California, 1960-1975," and examines differences among various approaches to master planning. Section 3 examines state financing of higher education, providing information on levels and sources of support, financing of public and independent institutions, student charges, financial aid, and prospects for future funding. Section 4 addresses the coordination of higher education in the United States and California, focusing on the coordinating roles of the California Postsecondary Education Commission and the California Education Round Table. Section 5 deals with economic development issues, while section 6 asseses the size and scope of the educational enterprise in California at undergraduate and graduate levels. Section 7 examines the quality of undergraduate education and the prospects for reform. In section 8, trends in and programs for educational equity for students and employment equity for faculty are reviewed. Section 9 deals with California's community colleges, considering their purpose and mission, shifts in programs and enrollments, student characteristics, faculty and staff, and governance. The final section offers an agenda for higher education, addressing issues of equity and excellence, cooperation with public schools, faculty replacement, teacher education, student financial aid, community colleges, and economic development. Appendixes contain information on master planning, educational finance, the enabling legislation for the Commission, and ethnicity reporting problems. (ALB)

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PREPARING FOR THE TWENTY-FIRST CENTURY

A Report on Higher Education in California

CLIVE P. CONDREN

CALIFORNIA POSTSECONDARY EDUCATION COMMISSION

JC 890 222

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Background on the Report

Clive Condren, Director of Educational Relations for the University of California from 1972 to 1987, prepared this document for use by representatives of the Organization for Economic Cooperation and Development (OECD), who visited California in April 1988 to meet with educators, students, and public officials in preparation for writing their own report on California higher education for publication by OECD. OECD is an international organization of industrialized market-economy countries, including the western European nations, Australia, Japan, New Zealand, Canada, and the United States of America. Its 24 countries work together to harmonize their policies in order to cope with major economic and social issues.

The members of OECD's visiting team were:

- Professor A. H. Halsey, Director, Department of Social and Administrative Studies, and Fellow, Nuffield College, University of Oxford.
- Dr. Michio Nagai, Senior Advisor to the Rector, United Nations University, and former Education Minister of Japan.
- Pierre Tabastoni, Former Chancellor, University of Paris.
- Dorotea Furth, Head of the Higher Education Programme; Directorate for Social Affairs, Manpower, and Education; Organization for Economic Cooperation and Development, Paris.

For the benefit of the visiting team, Mr. Condren organized the report into ten parts, beginning with four sections on how educational policy is made and implemented in California and continuing with six sections on major topics of concern in the State, including the role of higher education in the State's economy, the interrelationship of higher education functions, the maintenance of quality, the provision of educational equity, and the place of California's community colleges within its total educational system.

Additional copies of the report may be obtained from the Library of the Commission at (916) 322-8031. Questions about the substance of the report may be directed to Mr. Condren at (415) 642-0787 or to Kenneth B. O'Brien, the Commission's Associate Director, at (916) 322-7986.

PREPARING FOR THE TWENTY-FIRST CENTURY

A Report on Higher Education in California Requested by the Organization for Economic Cooperation and Development

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Written for the Statutory Advisory Committee
of the California Postsecondary Education Commission
and for the California Education Round Table
by Clive P. Condren

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CALIFORNIA POSTSECONDARY EDUCATION COMMISSION
1988

CALIFORNIA POSTSECONDARY EDUCATION COMMISSION REPORT 88-1
PUBLISHED FEBRUARY 1988

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On the cover: an equidistant view of the world, with distances along any line through California true to scale.

STATE OF CALIFORNIA GEORGE DEUKMEJIAN, *Governor*

CALIFORNIA POSTSECONDARY EDUCATION COMMISSION
1020 TWELFTH STREET
SACRAMENTO, CALIFORNIA 95814
(916) 445-7933

February 5, 1988

Dorotea Furth
Organization for Economic
Cooperation and Development
2, rue Andre-Pascal
75775 Paris CEDEX 16
France

Dear Dorotea Furth:

On behalf of the four segments of higher education in California and the California Postsecondary Education Commission, we are forwarding "Preparing for the Twenty-First Century," the background study of California higher education prepared as part of the review of the system to be conducted with the Organization for Economic Cooperation and Development. We are honored to participate with the Organization in this unique study process, which will mark the first time you have initiated a study of the system of higher education in a political subdivision of a member nation.

We thought it wise to develop a descriptive report embracing information on the essential elements of the system, knowing full well that certain questions of unusual interest to the Organization--for example, the relationship of higher education to the economy--should be developed in greater detail during the tour of California in April by the visiting team. At that time the report of the legislative committee reviewing the Master Plan for Higher Education will also be available, and we will have an opportunity to acquaint the team members with the principal findings and recommendations in that report. To further amplify essential aspects of California higher education, we have asked the institutions to be visited in April to focus the program for the campus session on a theme appropriate to the system or campus mission and program. In this way we believe the team will be presented with detailed information on a variety of topics. This will be further supplemented by visits to Sacramento, appointments with the chief executive officers of the segments, and a special meeting on higher education and the economy.

We wish to thank Clive Condren, who prepared the report, and Sandria Freitag, who made important contributions to the text. In addition, the assistance of Debbie Glassman is appreciated. Finally, we must acknowledge the contributions of JB Hefferlin, whose editorial contributions were invaluable.

We look forward to seeing you and the members of the visiting team in April. We welcome the opportunity to join with you in an exchange of views on the many, challenging issues facing higher education here and throughout the world. The entire review process has aroused a good deal of interest in the state and is seen as a unique learning opportunity.

Sincerely,

Joyce B. Justus William Moore

Joyce B. Justus
Chair, Statutory Advisory Committee

William Moore
Chair, California Education
Roundtable Staff

Attachment

cc: Members of the OECD Visiting Team
President Gardner
Executive Director Pickens
Acting Chancellor Randall
Chancellor Reynolds
President Winter
Members of the Statutory Advisory Committee
Associate Director O'Brien
Coordinator Condren

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One California and the Nation

Overview of California

Size and Population

California, the most populous and prosperous of America's 50 states, is larger than England, Italy, Japan, or Norway, but smaller than France, Sweden, or Spain. It has nearly three times Sweden's population and five times Norway's but less than two-thirds of Spain's, only slightly more than half the population of Italy, France, or England, and only one-tenth the population of Japan.

California consists of only 4.4 percent of the United States' total land mass, but as of 1980, it accounted for 10.4 percent of its population and 13.4 percent of its college and university students.

It is growing far more from immigration than from new births. According to the sociologist Harold Hodginson, "California is now accepting almost one-third of the world's immigration," and without immigration from other countries and in-migration from other states, "the California population would actually be decreasing. Fifteen percent of California's population was born in another *country* while 55 percent was born in another *state*" (1986, p. 1).

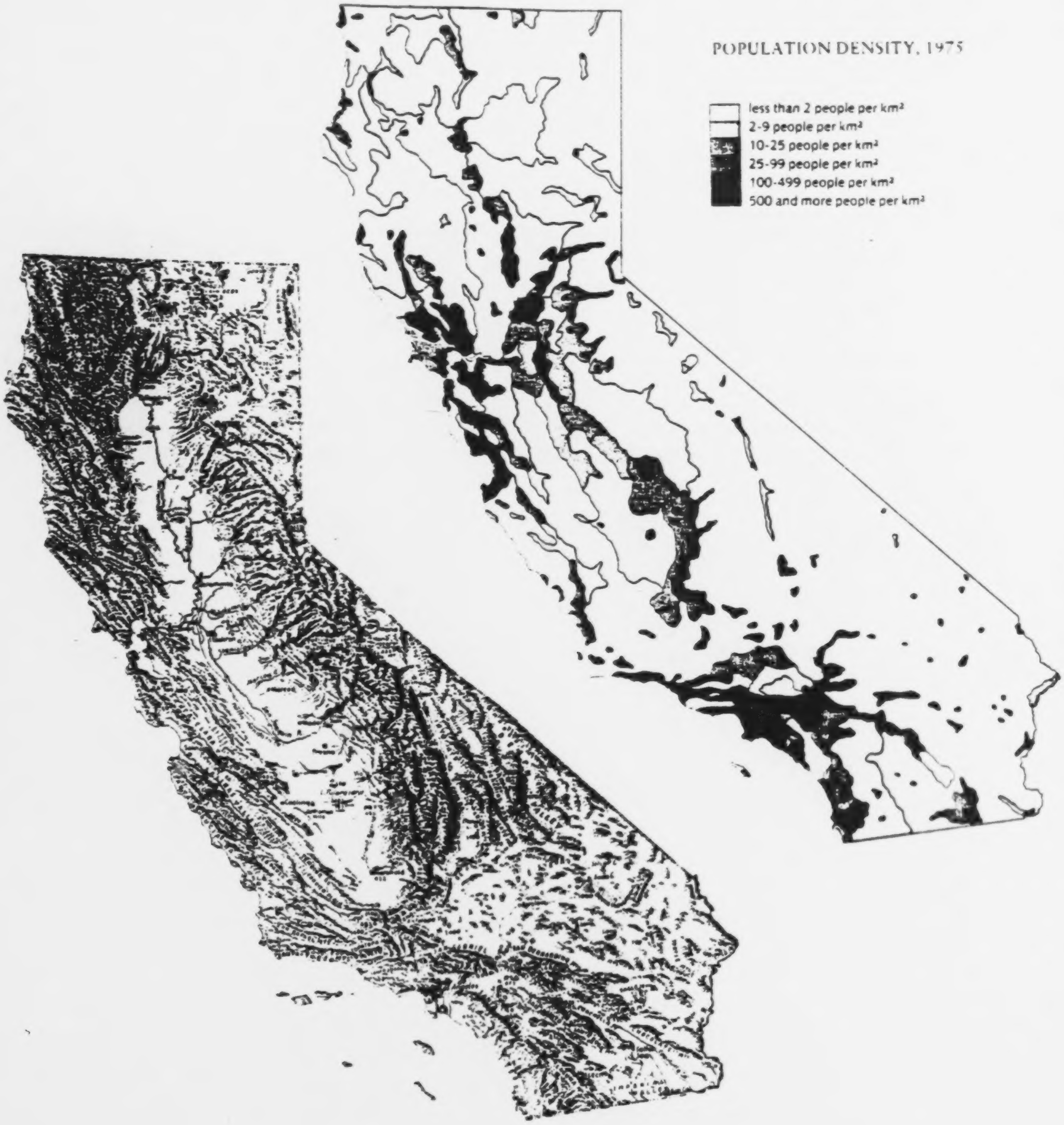
It is the most urban state in the United States: 95 percent of its residents live in its metropolitan regions. (Display 1 on page 2 illustrates the density of its population in light of its topography.)

California's population has been ethnically diverse ever since the 1849 gold rush. As of 1980, 6 percent of its population were Asians and Pacific Islanders -- the second largest proportion of any state, behind Hawaii. Its 19 percent of Hispanic residents was the third largest proportion out of the 50 states, and its 8 percent of Blacks was the twenty-first largest. By the year 2000, a majority of Californians will be ethnic minorities.

California's Economy

California's economy is the world's sixth largest. As of 1985, its $511 billion gross state product trailed only that of the rest of the United States ($8,404 billion), the Soviet Union ($2,063), Japan ($1,366), West Germany ($668), and France ($527). That year, it surpassed the United Kingdom ($474) and

DISPLAY 1 California's Topography and 1975 Density of Population



Source: Donley, Allan, Caro, and Patton, 1979, pp. 28 and 114.

continued ahead of Italy ($371), Canada ($347), and all other countries. According to London's *The Economist*, its economy may be in fourth place by the year 2000 (California Department of Commerce, 1987, p. 7).

In 1984, it ranked fourth among the 50 states in per-capita income -- at $12,443 per person -- behind Alaska at $14,957, Connecticut at $14,044, and New Jersey at $13,179. It ranked seventh in median family income -- at $31,967 -- behind Alaska at $38,238, Connecticut at $37,703, and New Jersey, Maryland, Nevada, and Massachusetts, in that order (American Council on Education, 1987, pp. 21-21and 24-25).

Research and Education

California is an international center for research and development, and it leads the nation in talent, resources, and facilities devoted to these activities. In 1981, it had as many employed scientists and engineers -- 574,000 -- as the next two states combined, and it was home to over 13 percent of America's industrial research laboratories and 11 percent of the nation's private research firms and individuals. This considerable massing of talent and physical plant draws massive research and development funding to the state: In 1985, the federal government spent over 20 percent of its research and development funds in California, and spending by both California industries and universities exceeded 13 percent of the national total.

As of 1980, California tied with Maryland for eighth place among the states in its percentage of college graduates among 25-year olds and older -- 19.8 percent, compared to 23.0 percent in first-place Colorado, 22.4 in Alaska, 21.1 in Connecticut, 20.3 in both Hawaii and Utah, and 20.0 in Massachusetts (American Council on Education, pp. 12-13).

In terms of percentage of high school graduates, it ranked tenth of the states at 73.6 percent, compared to 82.8 percent in Alaska, 80.3 in Utah, 78.1 in Colorado, 77.8 in Wyoming, 77.0 in Washington, 75.5 in Nevada, 75.4 in Montana, 74.7 in Oregon, and 73.8 in Nebraska (ibid.).

Yet its drop-out rate is high: It ranks about fortieth of all 50 states in its ability to retain young people to high school graduation -- among other reasons, because its public schools have the largest class size of any state -- 24 students in elementary schools, and 28 in high school, compared to a national average of about 18 (Hodgkinson, pp. 5, 6).

Government Expenditures

In terms of state and local government expenditures per capita, it most recently ranked fourteenth among the states. At $2,357 per capita in 1983-84, it lagged behind Alaska at $8,729, Wyoming at $3,904, and New York, Minnesota, Delaware, New Mexico, North Dakota, Hawaii, Nevada, Michigan, Oregon, Montana, and Wisconsin, in that order -- although it remained above the national average of $2,131 and far ahead of the lowest state, Arkansas, at $1,478 (U.S. Department of Education, 1987, p. 28).

In terms of government expenditures *for education* per capita, it most recently ranked twenty-fourth among the states -- at $759, behind Alaska at $2,309, Wyoming at $1,526, and Delaware, New Mexico, North Dakota, Montana, Wisconsin, Oregon, Minnesota, New York, Utah, Michigan, Iowa, Vermont, Colorado, Washington, Kansas, Nebraska, Maryland, Arizona, Texas, New Jersey, and Oklahoma, in that order, and slightly above the national average of $746 but far ahead of last-place Tennessee at $540 (ibid.).

In terms of government expenditures for *higher education* per capita, it ranks sixteenth -- at $245, behind Alaska at $569, Wyoming at $390, Delaware, North Dakota, Wisconsin, Utah, Iowa, New Mexico, Arizona, Vermont, Hawaii, Oregon, Colorado, Kansas, and Minnesota, in that order, and somewhat above the national average of $202, but far ahead of last place Pennsylvania at $101 (ibid.).

Overview of California Postsecondary Education

Education beyond the high school or "postsecondary education" in California is a multi-segmental system of institutions coordinated by the California Postsecondary Education Commission -- a statutory planning and coordinating agency with primarily advisory powers. California's institutions of postsecondary education can be categorized in a variety of ways, but two major types are (1) state-supported or "public" institutions: and (2) "independent" and "private" institutions that receive no direct tax support from the state and rely heavily on tuition for operating costs.

- State-supported colleges and universities include three major groups or "segments" of institutions -

  The California State University, consisting of 19 campuses;

  The University of California, with nine campuses; and

  The California Community Colleges, with 106 colleges;

  plus two small separate institutions -- the California Maritime Academy located in Vallejo, which prepares merchant marine officers, and the Hastings College of the Law in San Francisco, which prepares lawyers in affiliation with the University of California.

- Non-state-supported institutions include:

  Over 200 accredited colleges and universities;

  Some 150 non-accredited colleges and universities; and

  Over 2,400 non-degree-granting vocational schools.

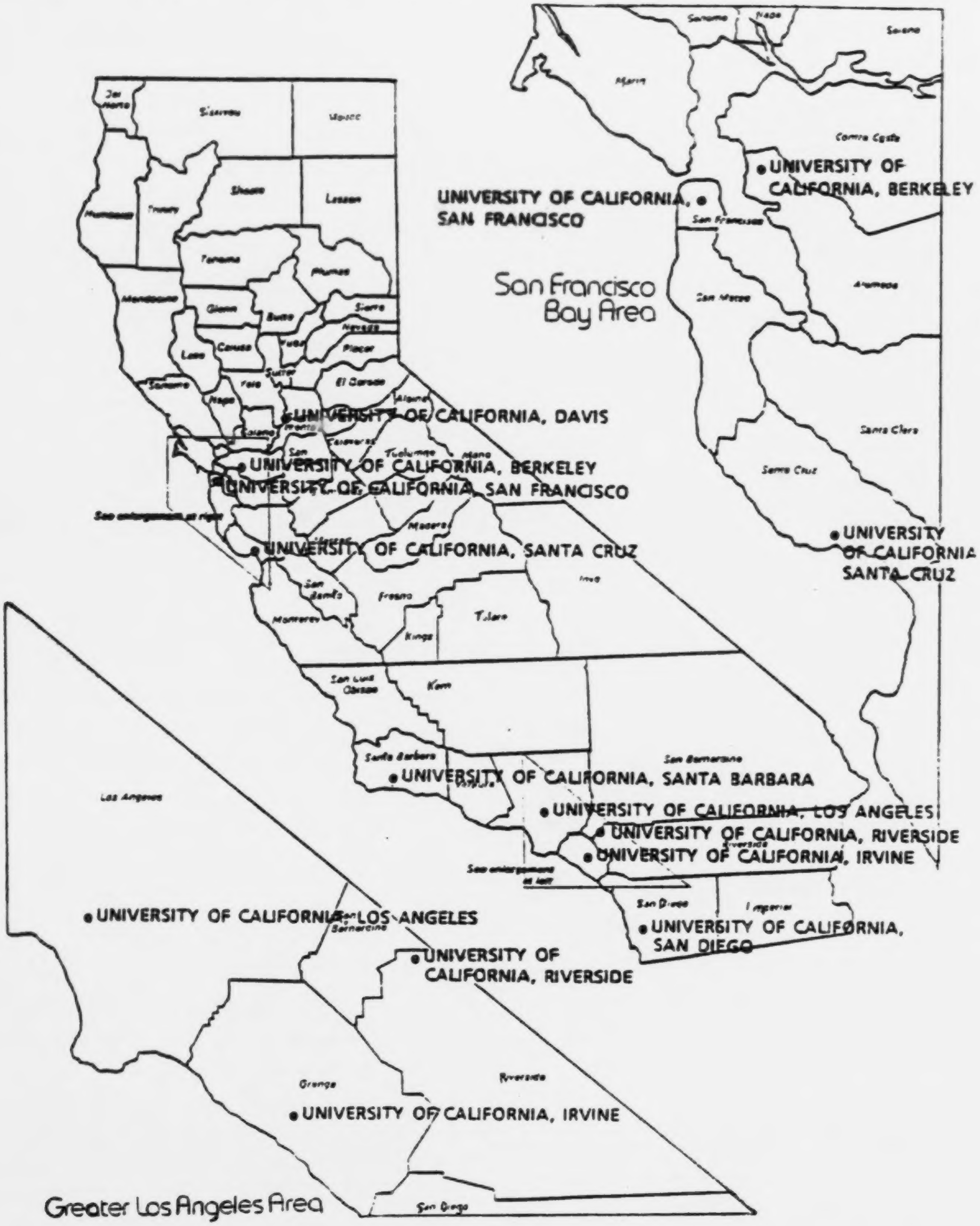
Besides these educational institutions, a number of state agencies and private associations carry out important functions for higher education -- such as accreditation and policy setting for student financial aid. The most significant of them are discussed after the following overview of the several segments, and various elements of the system are discussed in greater detail in later sections of the report.

The Three State-Supported Segments

The University of California: The University of California, which opened in 1868 at Oakland with ten teachers and 38 students, is today one of the world's most distinguished institutions of higher education. It is California's primary state-supported academic agency for research; it offers four-year undergraduate (baccalaureate) programs and graduate programs in a wide variety of fields; it has exclusive jurisdiction among public institutions over graduate instruction in dentistry, law, medicine, and veterinary medicine; and among public institutions it has sole authority to award the doctoral degree, except in fields where it awards joint doctorates with the California State University.

The University, which enrolled 147,957 students this last fall, has eight general campuses and a health sciences campus in San Francisco (Display 2). The eight general campuses range in size from the University of California, Los Angeles (UCLA), with 34,378 students, to Riverside with 5,227. All campuses have common undergraduate admission requirements and similar student fees, but each has its own distinctive character, atmosphere, and program. The Davis campus, near Sacramento, has long had a major emphasis in agriculture and has the only public program in veterinary medicine. The San Diego campus has a long association with oceanography through the Scripps Institution of Oceanography. The University operates five schools of medicine and three schools of law, and it has an affiliation with Hastings College of the Law, which is governed by its own board of trustees.

DISPLAY 2 Campuses of the University of California



Source: California Postsecondary Education Commission.

University freshmen are selected from among the top one-eighth (12½ percent) of California high school graduates. Every qualified student who is a resident of California is entitled to admission at one of the University's campuses, although not necessarily at the campus of first choice.

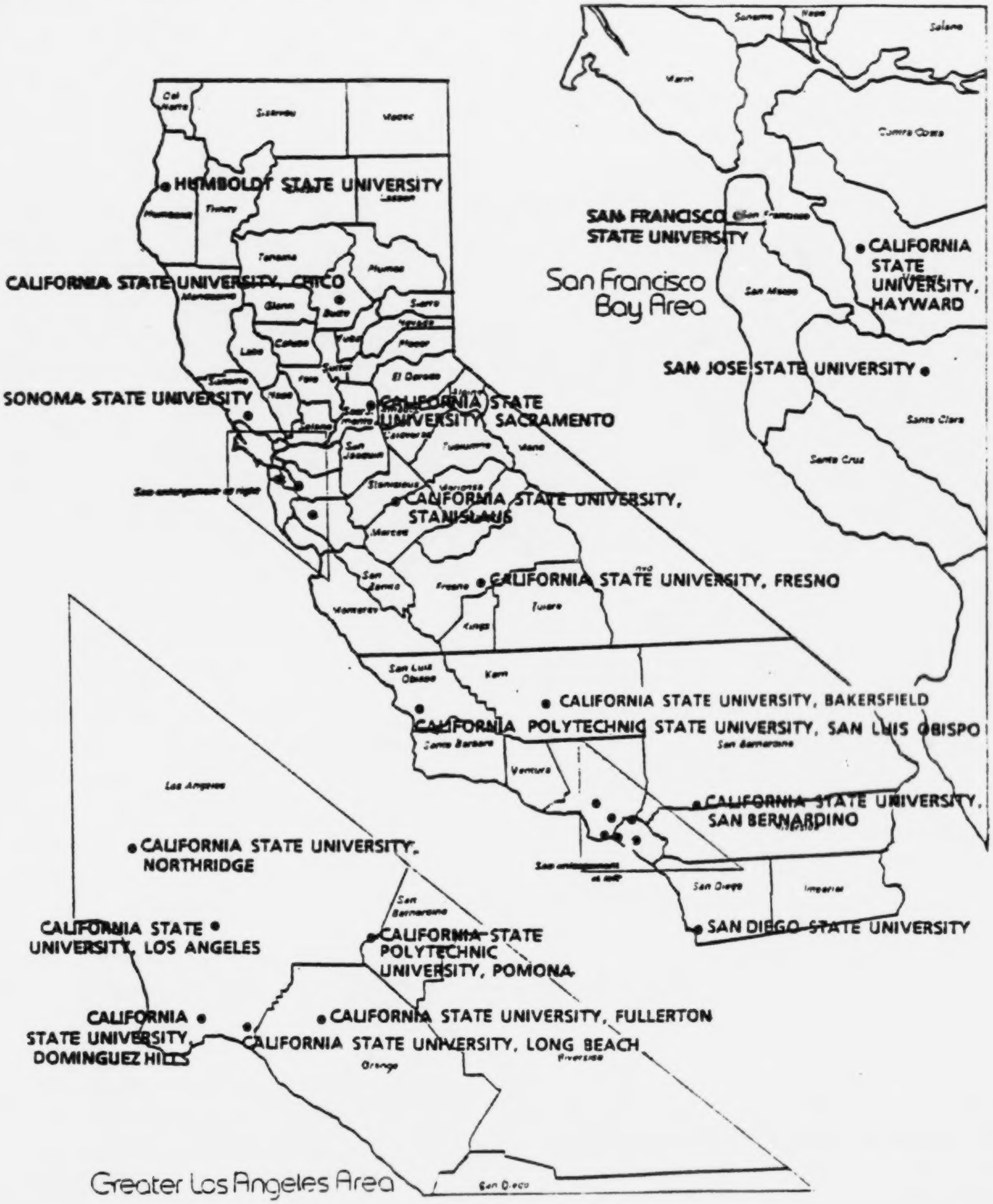
The University is governed by the Regents of the University, a 30-member board that appoints the president and, with the advice of the president, names the chancellors of the nine campuses. A University-wide Academic Senate under authority delegated to the faculty by the Board of Regents has wide discretion in establishing policy on admissions, granting of degrees, new course offerings, and other aspects of the academic process, such as peer review. Appointive regents are selected by the Governor for 12-year terms and confirmed by the Senate of the California Legislature. Ex officio regents include the president and vice president of the Alumni Association of the University of California, the Governor, the Lieutenant Governor, the Speaker, the Superintendent of Public Instruction, and the President of the University. A student regent is selected by the Board. In addition, the chair and vice chair of the faculty Academic Council sit with the Board as nonvoting faculty representatives.

The California State University: The California State University had its origins in 1857 when California's first normal school opened in San Francisco. For nearly a century, the state's normal schools -- later teachers' colleges and then state colleges -- were governed by the State Board of Education, but in 1960, under the Master Plan for Higher Education of 1960-1975, the Legislature organized them as the "California State College System" under their own board of trustees. In 1972, the Legislature changed the name of the system to the "California State University and Colleges" and in 1981 changed the name again to the present title.

The primary function of the State University is instruction of undergraduate and master's degree students in the liberal arts and sciences, applied fields, and professions, including teaching. Its faculty are authorized to undertake research to the extent that it is consistent with this primary function. In addition, the State University offers joint doctoral programs with the University of California and with independent universities. It admits its freshmen from the top third of California high school graduates.

The 19 campuses of the State University illustrated in Display 3 on the next page range in size from San Diego, with 34,000 students, to Bakersfield, with around 4,000. Each campus has its own distinctive character. For example, Stanislaus, in the agriculturally rich Central Valley, operates on a "four-one-four" calendar of two semesters and a one-month winter term, while eight other campuses are on the quarter calendar and the remaining

DISPLAY 3 Campuses of the California State University


HUMBOLDT STATE UNIVERSITY
CALIFORNIA STATE UNIVERSITY, CHICO
SONOMA STATE UNIVERSITY
CALIFORNIA STATE UNIVERSITY, SACRAMENTO
CALIFORNIA STATE UNIVERSITY, STANISLAUS
CALIFORNIA STATE UNIVERSITY, FRESNO
CALIFORNIA STATE UNIVERSITY, BAKERSFIELD
CALIFORNIA POLYTECHNIC STATE UNIVERSITY, SAN LUIS OBISPO
CALIFORNIA STATE UNIVERSITY, SAN BERNARDINO
SAN DIEGO STATE UNIVERSITY
SAN FRANCISCO STATE UNIVERSITY
San Francisco Bay Area
CALIFORNIA STATE UNIVERSITY, HAYWARD
SAN JOSE STATE UNIVERSITY
CALIFORNIA STATE UNIVERSITY, NORTHRIDGE
CALIFORNIA STATE UNIVERSITY, LOS ANGELES
CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA
CALIFORNIA STATE UNIVERSITY, DOMINGUEZ HILLS
CALIFORNIA STATE UNIVERSITY, FULLERTON
CALIFORNIA STATE UNIVERSITY, LONG BEACH
Greater Los Angeles Area

Source: California Postsecondary Education Commission.

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ten use the semester calendar. Two campuses -- Pomona and San Luis Obispo -- emphasize polytechnic and professional programs. Four campuses -- Hayward, Los Angeles, Pomona, and San Luis Obispo -- offer year-round instruction, including a full summer quarter, while others offer limited summer programs.

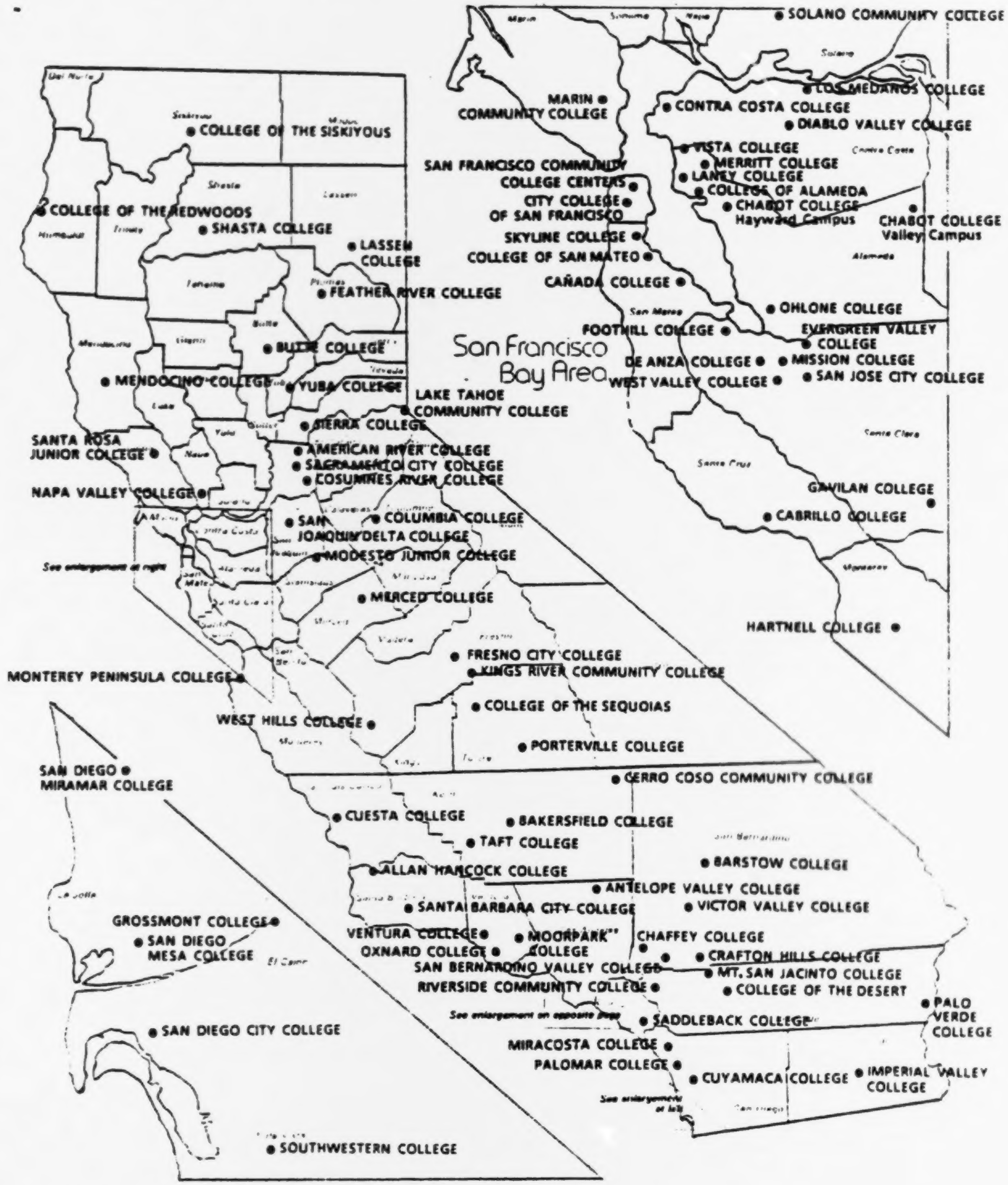
The Trustees of the California State University govern the system and appoint its chancellor and the presidents of the campuses. There are 24 trustees, five of whom are ex officio members. These include the Governor, the Lieutenant Governor, the Speaker of the Assembly of the California Legislature, the Superintendent of Public Instruction, and the Chancellor. Sixteen appointed trustees are named by the Governor for eight-year terms. The alumni trustee, selected by alumni, and the student and faculty trustees, named by the Governor from among candidates recommended by their respective constituencies, serve for two years.

A university-wide Academic Senate of faculty members recommends policy to the Trustees through the Chancellor.

The California Community Colleges: Since 1908, California's community colleges have evolved from extensions of high schools into junior colleges emphasizing transfer and vocational courses and more recently into comprehensive community centers offering broad educational opportunities to meet local educational needs. Last fall, they enrolled over a million students. These institutions range in size from Mt. San Antonio College, with 26,239 students, to Palo Verde College with 638. Naturally, programs also vary widely in scope and breadth.

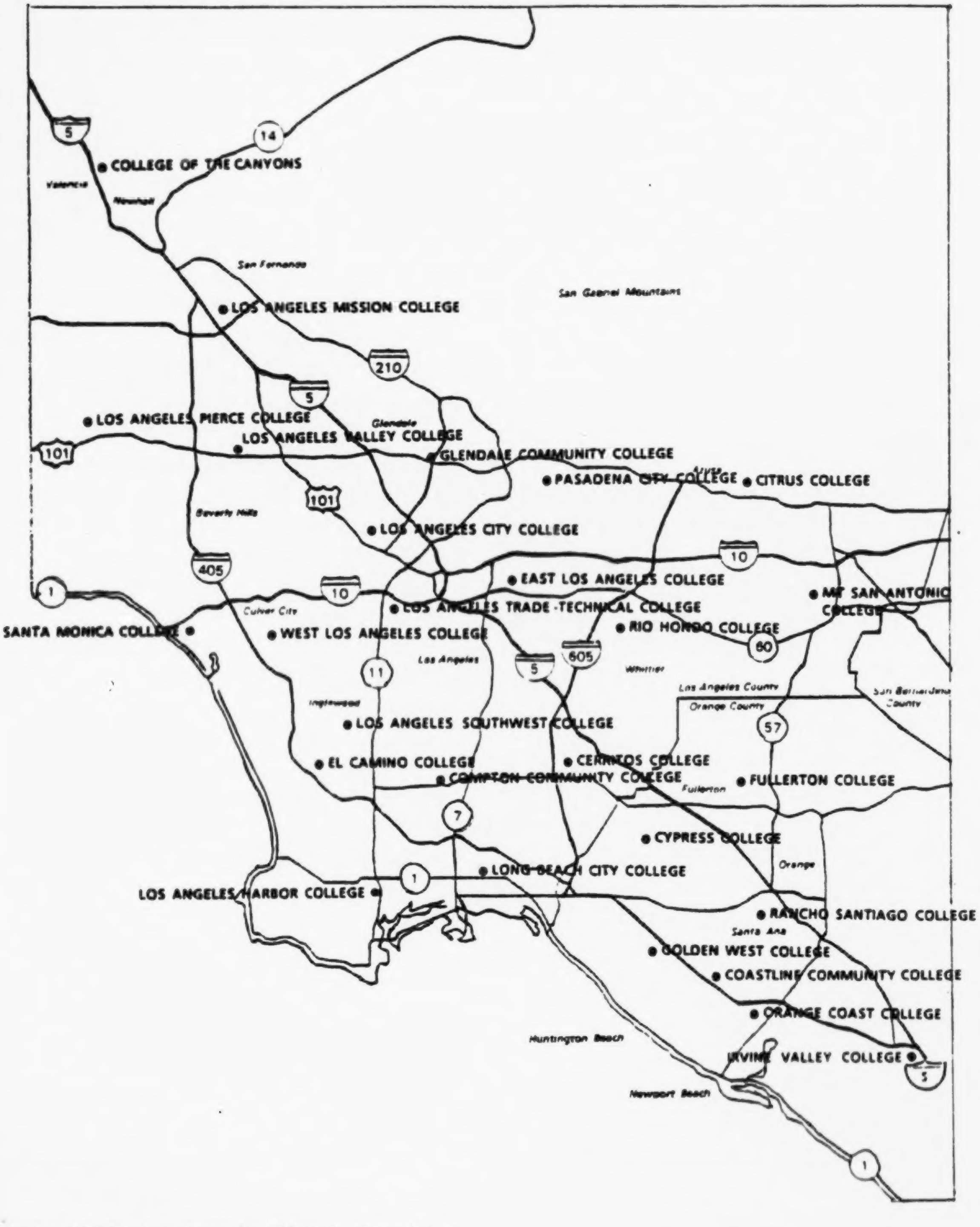
California's 106 community colleges (Displays 4 and 5, pages 10 and 11) offer instruction through but not beyond the second year of college. They may grant vocational and technical certificates and the associate in arts and associate in science degrees. Through community service and adult education programs, they offer noncredit classes in literacy, health, civic, technical, and general education. For students who work full time during the day, they offer evening courses that lead to the same certificates and degrees available to day students. Many colleges offer apprenticeship programs that provide apprenticeship training in a variety of vocational fields. All community colleges offer programs fulfilling the requirements for the first two years of work at a four-year college or university. Forty-five percent of all community college courses are eligible for transfer to four-year institutions. Students planning to transfer examine the degree requirements and confer with college counselors to ensure that the college courses they take will be transferable for baccalaureate-degree credit. The community colleges also offer a wide range of community service courses on such topics

DISPLAY 4 California Community Colleges Outside of the Los Angeles Basin



Source: California Postsecondary Education Commission.

DISPLAY 5 California Community Colleges in the Los Angeles Basin



Source: California Postsecondary Education Commission.

as cardio-pulmonary resuscitation, traffic school, and foreign languages for travelers.

The community colleges operate under an "open access" admissions policy, whereby anyone who possesses a high school diploma or equivalent, or who is over the age of 18 and can benefit from instruction is eligible for admission. Recent legislation also allows a limited number of students of any grade level to enroll with the consent of their high school principal and acceptance by a community college president.

Of the three state-supported or "public" segments, the community colleges are the least centralized. Seventy community college districts operate California's community colleges (Displays 4 and 5). Of these districts, Los Angeles -- by far the largest -- operates nine colleges. The districts are governed by locally elected boards of trustees. Prior to 1967, statewide leadership was the responsibility of the State Board of Education, but in that year the Legislature and Governor created the Board of Governors to provide statewide leadership and policy direction for the colleges. Comprised of 15 members, the Board selects the State Chancellor who supervises the Chancellor's Office staff. The Board is also charged by state law to "provide leadership and direction in the continuing development of community colleges" while "maintaining and continuing to the maximum degree possible, local autonomy and control in the administration of the community colleges." The Governor appoints the members of the Board for four-year terms with the exception of the student member, who serves for one year.

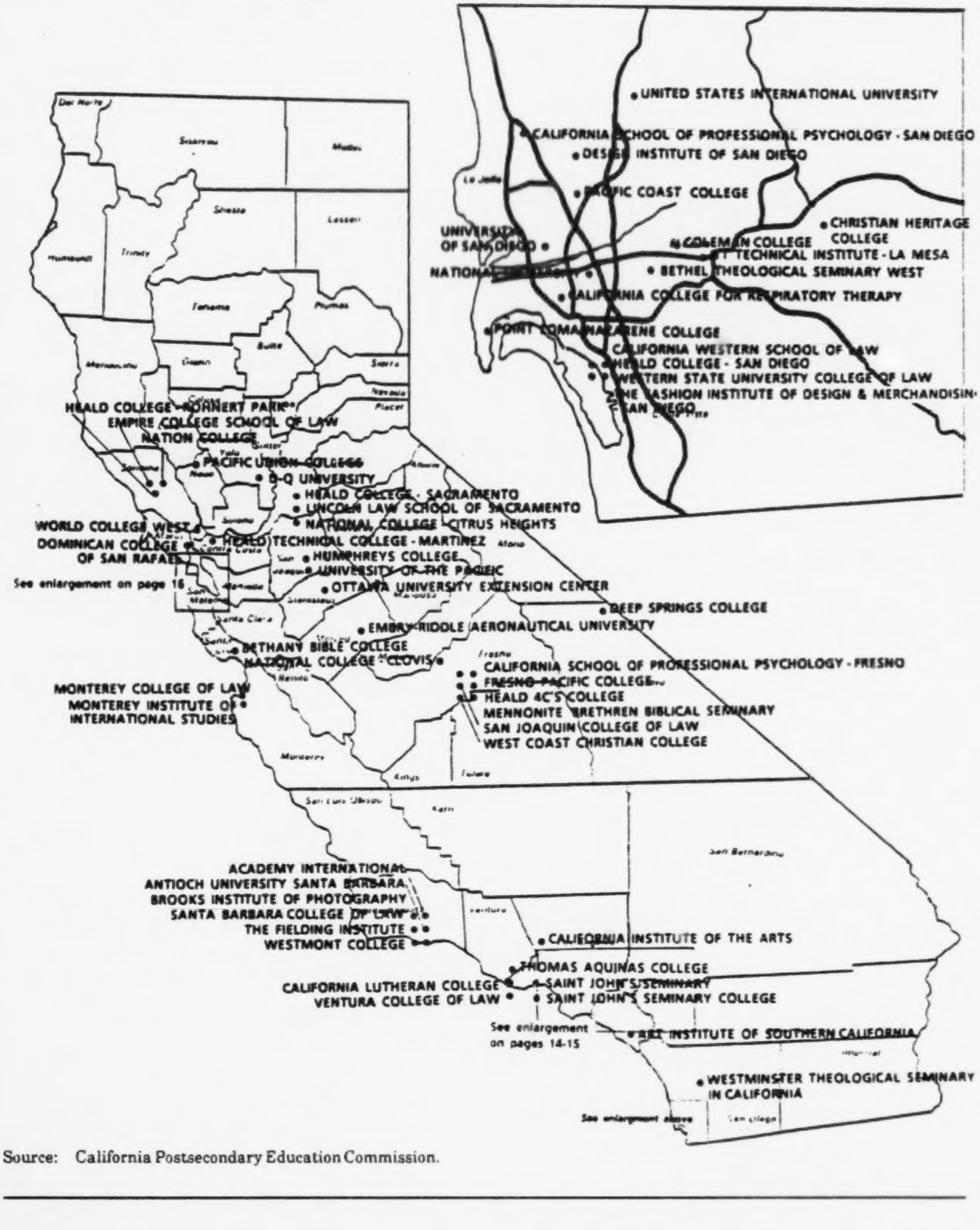
The Independent and Private Sectors

Accredited Independent Institutions: Two hundred and nine of California's non-state-supported institutions are either accredited or are candidates for accreditation by accrediting agencies recognized by the United States Secretary of Education or else the Committee of State Bar Examiners of the State of California (Display 6, 7, and 8, pages 13-16). Because of this accreditation, these institutions are eligible under state law to award certificates and degrees without review of the Superintendent of Public Instruction.

The most distinctive feature of California's accredited independent colleges and universities is their diversity of character, academic emphasis, and programs. They include both religious and secular institutions, and schools that offer only a single occupational specialty as well as universities offering a full array of bachelor's, master's and doctoral degree programs. In age, they range from the University of Pacific and Santa Clara University, both founded in 1851, to the DeVry Institute of Technology, Los Angeles, founded

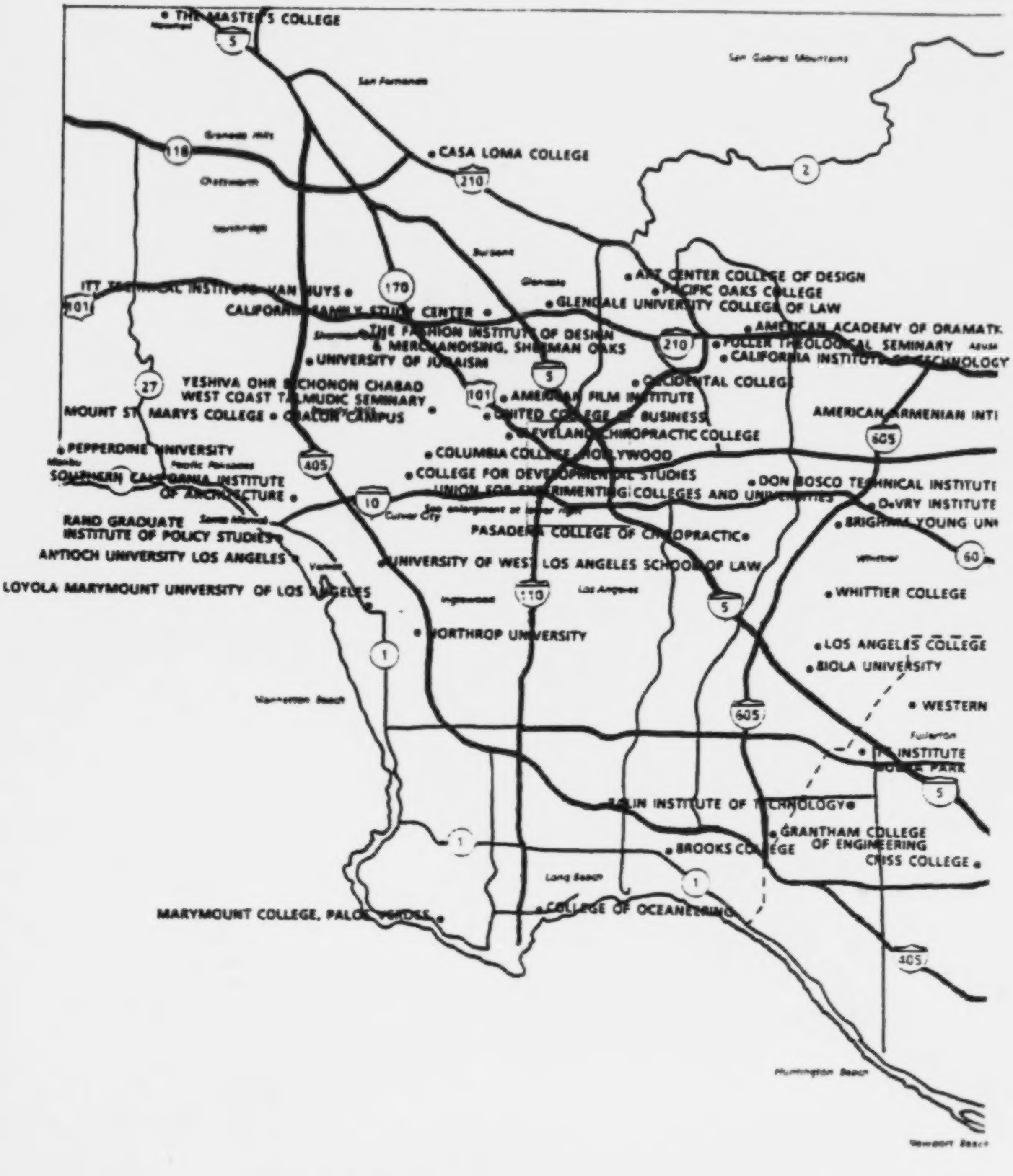
(Text continues on page 17)

DISPLAY 6 *Accredited Independent Institutions Outside of the Los Angeles Basin and the San Francisco Bay Region*


UNITED STATES INTERNATIONAL UNIVERSITY
CALIFORNIA SCHOOL OF PROFESSIONAL PSYCHOLOGY - SAN DIEGO
DESIGN INSTITUTE OF SAN DIEGO
PACIFIC COAST COLLEGE
La Jolla
CHRISTIAN HERITAGE COLLEGE
UNIVERSITY OF SAN DIEGO
COLEMAN COLLEGE
ITT TECHNICAL INSTITUTE - LA MESA
NATIONAL UNIVERSITY
BETHEL THEOLOGICAL SEMINARY WEST
CALIFORNIA COLLEGE FOR RESPIRATORY THERAPY
POINT LOMA NAZARENE COLLEGE
CALIFORNIA WESTERN SCHOOL OF LAW
HEALD COLLEGE - SAN DIEGO
WESTERN STATE UNIVERSITY COLLEGE OF LAW
THE FASHION INSTITUTE OF DESIGN & MERCHANDISING - SAN DIEGO
Del Norte
Siskiyou
Modoc
Shasta
Lassen
Humboldt
Trinity
Tehama
Plumas
Butte
Glenn
Mendocino
Sierra
Nevada
Placer
HEALD COLLEGE - ROHNERT PARK
EMPIRE COLLEGE SCHOOL OF LAW
NATION COLLEGE
Yolo
Sutter
PACIFIC UNION COLLEGE
Sonoma
Napa
D-Q UNIVERSITY
HEALD COLLEGE - SACRAMENTO
LINCOLN LAW SCHOOL OF SACRAMENTO
NATIONAL COLLEGE - CITRUS HEIGHTS
WORLD COLLEGE WEST
DOMINICAN COLLEGE OF SAN RAFAEL
HEALD TECHNICAL COLLEGE - MARTINEZ
Contra Costa
Alpine
HUMPHREYS COLLEGE
UNIVERSITY OF THE PACIFIC
See enlargement on page 16
San Mateo
OTTAWA UNIVERSITY EXTENSION CENTER
Stanislaus
Mariposa
DEEP SPRINGS COLLEGE
Santa Clara
EMBRY-RIDDLE AERONAUTICAL UNIVERSITY
Santa Cruz
BETHANY BIBLE COLLEGE
NATIONAL COLLEGE - CLOVIS
Merced
Fresno
CALIFORNIA SCHOOL OF PROFESSIONAL PSYCHOLOGY - FRESNO
FRESNO PACIFIC COLLEGE
San Benito
MONTEREY COLLEGE OF LAW
MONTEREY INSTITUTE OF INTERNATIONAL STUDIES
HEALD 4C'S COLLEGE
MENNONITE BRETHREN BIBLICAL SEMINARY
SAN JOAQUIN COLLEGE OF LAW
WEST COAST CHRISTIAN COLLEGE
Monterey
Kings
Tulare
San Luis Obispo
Kern
San Bernardino
ACADEMY INTERNATIONAL
ANTIOCH UNIVERSITY SANTA BARBARA
BROOKS INSTITUTE OF PHOTOGRAPHY
SANTA BARBARA COLLEGE OF LAW
THE FIELDING INSTITUTE
WESTMONT COLLEGE
Ventura
CALIFORNIA INSTITUTE OF THE ARTS
THOMAS AQUINAS COLLEGE
CALIFORNIA LUTHERAN COLLEGE
SAINT JOHN'S SEMINARY
VENTURA COLLEGE OF LAW
SAINT JOHN'S SEMINARY COLLEGE
See enlargement on pages 14-15
ART INSTITUTE OF SOUTHERN CALIFORNIA
Imperial
WESTMINSTER THEOLOGICAL SEMINARY IN CALIFORNIA
See enlargement above
San Diego

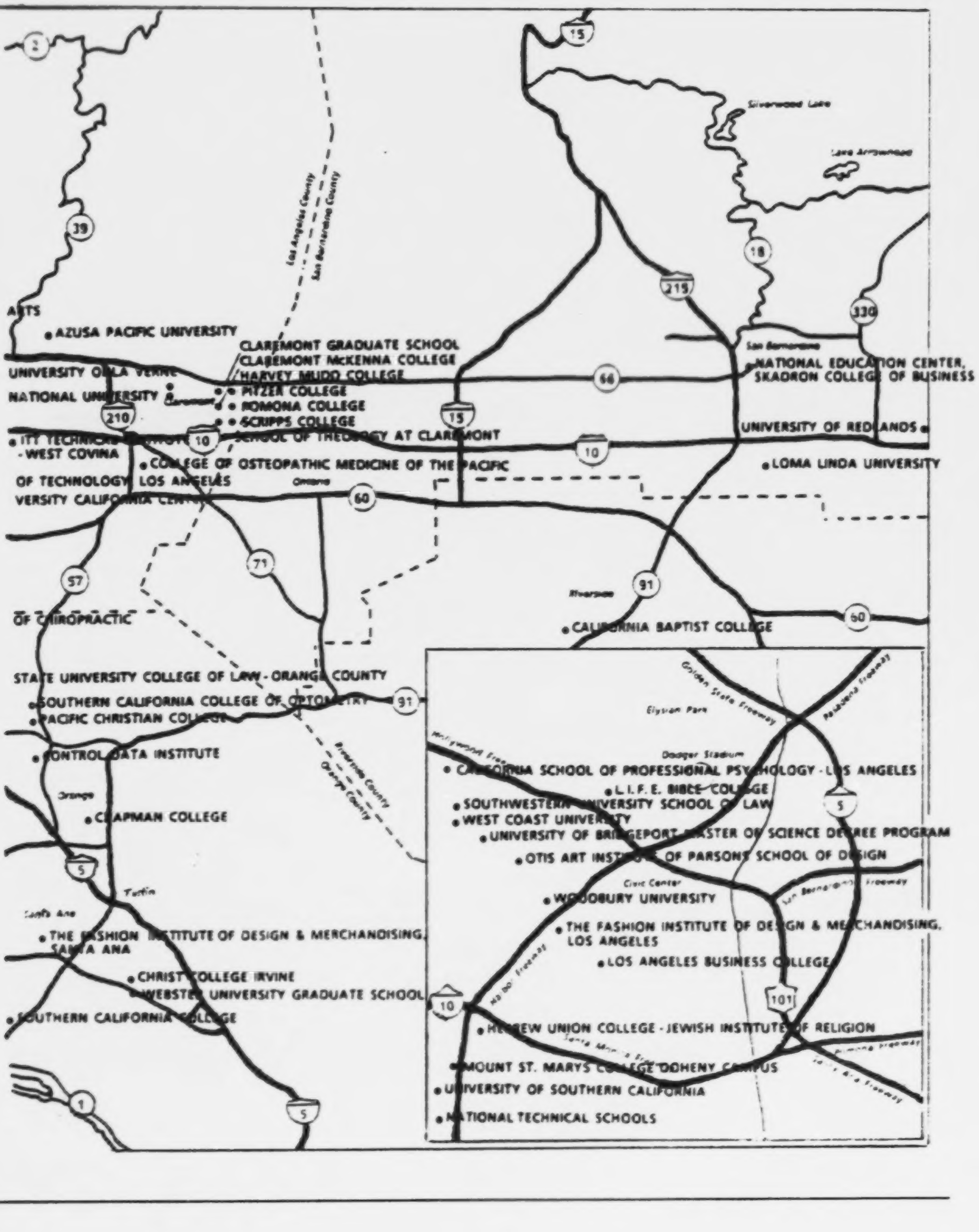
Source: California Postsecondary Education Commission.

DISPLAY 7 Accredited Independent Institutions in the Greater Los Angeles Basin

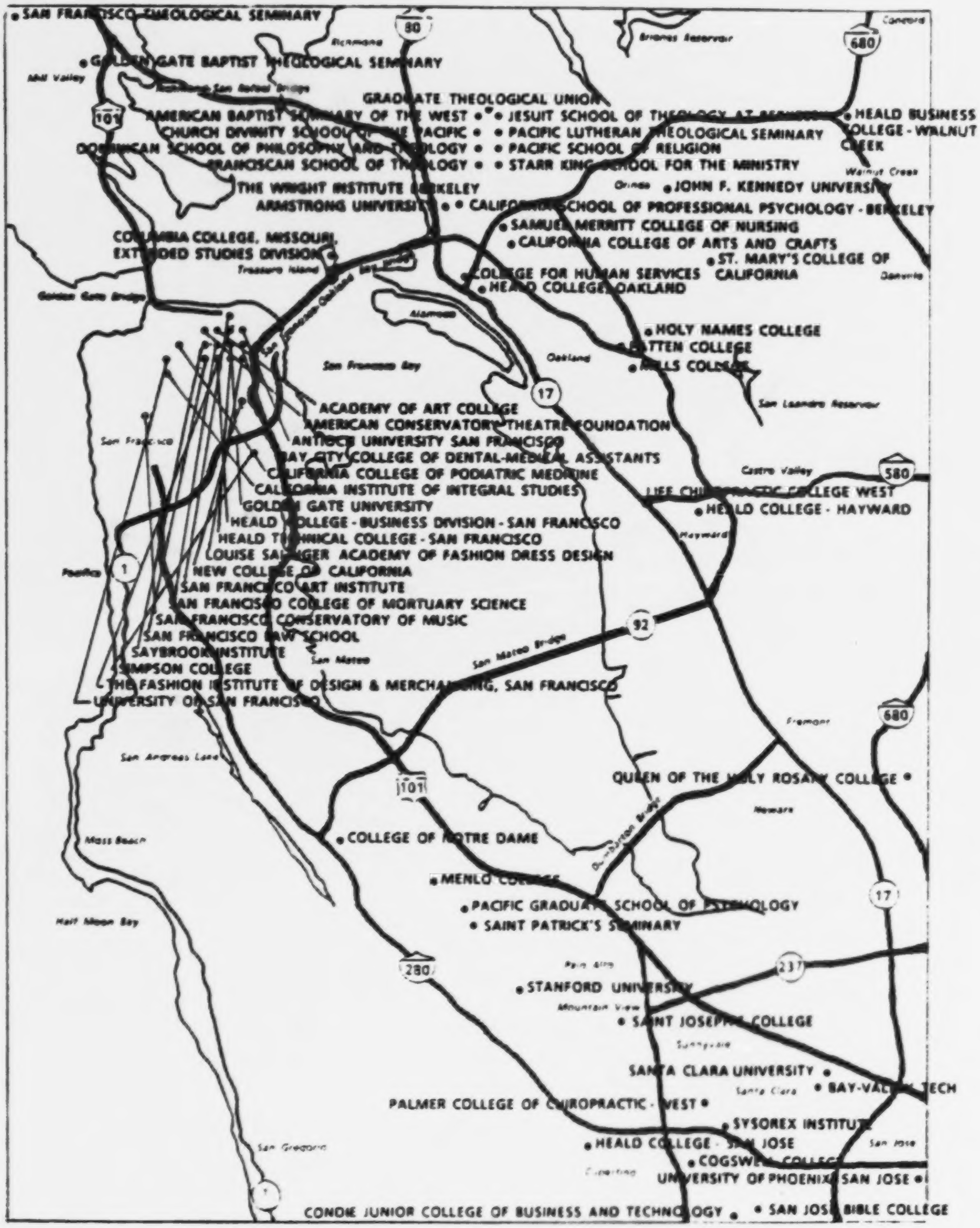


THE MASTER'S COLLEGE
Newhall
5
San Fernando
San Gabriel Mountains
Granada Hills
118
CASA LOMA COLLEGE
Chatsworth
210
2
Northridge
Burbank
Glendale
ITT TECHNICAL INSTITUTE-VAN NUYS
170
ART CENTER COLLEGE OF DESIGN
PACIFIC OAKS COLLEGE
GLENDALE UNIVERSITY COLLEGE OF LAW
101
CALIFORNIA FAMILY STUDY CENTER
AMERICAN ACADEMY OF DRAMAT
Sherman Oaks
THE FASHION INSTITUTE OF DESIGN & MERCHANDISING, SHERMAN OAKS
210
FULLER THEOLOGICAL SEMINARY
Azusa
CALIFORNIA INSTITUTE OF TECHNOLOGY
UNIVERSITY OF JUDAISM
27
YESHIVA OHR ELCHONON CHABAD
WEST COAST TALMUDIC SEMINARY
OCCIDENTAL COLLEGE
101
AMERICAN FILM INSTITUTE
MOUNT ST. MARYS COLLEGE • CHALON CAMPUS
UNITED COLLEGE OF BUSINESS
AMERICAN ARMENIAN INT
CLEVELAND CHIROPRACTIC COLLEGE
605
PEPPERDINE UNIVERSITY
Malibu
Pacific Palisades
COLUMBIA COLLEGE-HOLLYWOOD
405
SOUTHERN CALIFORNIA INSTITUTE OF ARCHITECTURE
COLLEGE FOR DEVELOPMENTAL STUDIES
DON BOSCO TECHNICAL INSTITUTE
UNION FOR EXPERIMENTING COLLEGES AND UNIVERSITIES
10
DeVRY INSTITUTE
RAND GRADUATE INSTITUTE OF POLICY STUDIES
Santa Monica
Culver City
See enlargement at lower right
BRIGHAM YOUNG UN
PASADENA COLLEGE OF CHIROPRACTIC
ANTIOCH UNIVERSITY LOS ANGELES
Venice
UNIVERSITY OF WEST LOS ANGELES SCHOOL OF LAW
Whittier
60
LOYOLA MARYMOUNT UNIVERSITY OF LOS ANGELES
Inglewood
110
Los Angeles
5
WHITTIER COLLEGE
NORTHROP UNIVERSITY
1
LOS ANGELES COLLEGE
BIOLA UNIVERSITY
Manhattan Beach
WESTERN
605
Fullerton
ITT INSTITUTE BUENA PARK
5
LIN INSTITUTE OF TECHNOLOGY
GRANTHAM COLLEGE OF ENGINEERING
1
BROOKS COLLEGE
CRISS COLLEGE
Long Beach
1
MARYMOUNT COLLEGE, PALOS VERDES
COLLEGE OF OCEANEERING
405
Huntington Beach
Newport Beach

Source: California Postsecondary Education Commission.


2
39
ARTS
AZUSA PACIFIC UNIVERSITY
UNIVERSITY OF LA VERNE
NATIONAL UNIVERSITY
Claremont
CLAREMONT GRADUATE SCHOOL
CLAREMONT McKENNA COLLEGE
HARVEY MUDD COLLEGE
PITZER COLLEGE
POMONA COLLEGE
SCRIPPS COLLEGE
SCHOOL OF THEOLOGY AT CLAREMONT
210
10
ITT TECHNICAL INSTITUTE
- WEST COVINA
COLLEGE OF OSTEOPATHIC MEDICINE OF THE PACIFIC
OF TECHNOLOGY, LOS ANGELES
VERSITY CALIFORNIA CENTER
Ontario
60
71
57
Los Angeles County
San Bernardino County
15
Silverwood Lake
Lake Arrowhead
18
215
330
66
San Bernardino
NATIONAL EDUCATION CENTER,
SKADRON COLLEGE OF BUSINESS
UNIVERSITY OF REDLANDS
LOMA LINDA UNIVERSITY
Riverside
91
CALIFORNIA BAPTIST COLLEGE
OF CHIROPRACTIC
STATE UNIVERSITY COLLEGE OF LAW - ORANGE COUNTY
SOUTHERN CALIFORNIA COLLEGE OF OPTOMETRY
PACIFIC CHRISTIAN COLLEGE
CONTROL DATA INSTITUTE
Riverside County
Orange County
Orange
CHAPMAN COLLEGE
5
Tustin
Santa Ana
THE FASHION INSTITUTE OF DESIGN & MERCHANDISING,
SANTA ANA
CHRIST COLLEGE IRVINE
WEBSTER UNIVERSITY GRADUATE SCHOOL
SOUTHERN CALIFORNIA COLLEGE
1
Golden State Freeway
Pasadena Freeway
Elysian Park
Hollywood Freeway
Dodger Stadium
CALIFORNIA SCHOOL OF PROFESSIONAL PSYCHOLOGY - LOS ANGELES
L.I.F.E. BIBLE COLLEGE
SOUTHWESTERN UNIVERSITY SCHOOL OF LAW
WEST COAST UNIVERSITY
UNIVERSITY OF BRIDGEPORT MASTER OF SCIENCE DEGREE PROGRAM
OTIS ART INSTITUTE OF PARSONS SCHOOL OF DESIGN
Civic Center
San Bernardino Freeway
WOODBURY UNIVERSITY
THE FASHION INSTITUTE OF DESIGN & MERCHANDISING,
LOS ANGELES
LOS ANGELES BUSINESS COLLEGE
Harbor Freeway
101
HEBREW UNION COLLEGE - JEWISH INSTITUTE OF RELIGION
Santa Monica Freeway
Pomona Freeway
Santa Ana Freeway
MOUNT ST. MARYS COLLEGE DOHENY CAMPUS
UNIVERSITY OF SOUTHERN CALIFORNIA
NATIONAL TECHNICAL SCHOOLS

DISPLAY 8 Accredited Independent Institutions in the San Francisco Bay Area


SAN FRANCISCO THEOLOGICAL SEMINARY
GOLDEN GATE BAPTIST THEOLOGICAL SEMINARY
Mill Valley
Richmond
Briones Reservoir
Concord
80
680
101
Richmond-San Rafael Bridge
GRADUATE THEOLOGICAL UNION
AMERICAN BAPTIST SEMINARY OF THE WEST
CHURCH DIVINITY SCHOOL OF THE PACIFIC
DOMINICAN SCHOOL OF PHILOSOPHY AND THEOLOGY
FRANCISCAN SCHOOL OF THEOLOGY
JESUIT SCHOOL OF THEOLOGY AT BERKELEY
PACIFIC LUTHERAN THEOLOGICAL SEMINARY
PACIFIC SCHOOL OF RELIGION
STARR KING SCHOOL FOR THE MINISTRY
HEALD BUSINESS COLLEGE - WALNUT CREEK
Walnut Creek
THE WRIGHT INSTITUTE BERKELEY
Orinda
JOHN F. KENNEDY UNIVERSITY
ARMSTRONG UNIVERSITY
CALIFORNIA SCHOOL OF PROFESSIONAL PSYCHOLOGY - BERKELEY
SAMUEL MERRITT COLLEGE OF NURSING
CALIFORNIA COLLEGE OF ARTS AND CRAFTS
COLUMBIA COLLEGE, MISSOURI, EXTENDED STUDIES DIVISION
Treasure Island
ST. MARY'S COLLEGE OF CALIFORNIA
Danville
COLLEGE FOR HUMAN SERVICES
HEALD COLLEGE - OAKLAND
Golden Gate Bridge
San Francisco-Oakland Bay Bridge
Alameda
HOLY NAMES COLLEGE
PATTEN COLLEGE
MILLS COLLEGE
San Francisco Bay
Oakland
17
San Leandro Reservoir
ACADEMY OF ART COLLEGE
AMERICAN CONSERVATORY THEATRE FOUNDATION
ANTIOCH UNIVERSITY SAN FRANCISCO
BAY CITY COLLEGE OF DENTAL-MEDICAL ASSISTANTS
CALIFORNIA COLLEGE OF PODIATRIC MEDICINE
CALIFORNIA INSTITUTE OF INTEGRAL STUDIES
GOLDEN GATE UNIVERSITY
HEALD COLLEGE - BUSINESS DIVISION - SAN FRANCISCO
HEALD TECHNICAL COLLEGE - SAN FRANCISCO
LOUISE SALINGER ACADEMY OF FASHION DRESS DESIGN
NEW COLLEGE OF CALIFORNIA
SAN FRANCISCO ART INSTITUTE
SAN FRANCISCO COLLEGE OF MORTUARY SCIENCE
SAN FRANCISCO CONSERVATORY OF MUSIC
SAN FRANCISCO LAW SCHOOL
SAYBROOK INSTITUTE
SIMPSON COLLEGE
THE FASHION INSTITUTE OF DESIGN & MERCHANDISING, SAN FRANCISCO
UNIVERSITY OF SAN FRANCISCO
San Francisco
Pacifica
1
Castro Valley
580
LIFE CHIROPRACTIC COLLEGE WEST
HEALD COLLEGE - HAYWARD
Hayward
92
San Mateo Bridge
San Mateo
Fremont
680
San Andreas Lake
101
QUEEN OF THE HOLY ROSARY COLLEGE
Newark
Moss Beach
COLLEGE OF NOTRE DAME
Dumbarton Bridge
MENLO COLLEGE
PACIFIC GRADUATE SCHOOL OF PSYCHOLOGY
SAINT PATRICK'S SEMINARY
17
Half Moon Bay
280
Palo Alto
237
STANFORD UNIVERSITY
Mountain View
SAINT JOSEPH'S COLLEGE
Sunnyvale
SANTA CLARA UNIVERSITY
Santa Clara
BAY-VALLEY TECH
PALMER COLLEGE OF CHIROPRACTIC - WEST
SYSOREX INSTITUTE
San Gregorio
HEALD COLLEGE - SAN JOSE
San Jose
COGSWELL COLLEGE
Cupertino
UNIVERSITY OF PHOENIX SAN JOSE
1
CONDIE JUNIOR COLLEGE OF BUSINESS AND TECHNOLOGY
SAN JOSE BIBLE COLLEGE

Source: California Postsecondary Education Commission.

in 1983. In size they range from the University of Southern California in Los Angeles, with over 27,000 students, to Deep Springs College with 24 students. Altogether, they enroll about one-fourth of all students attending four-year colleges and universities in California.

Information in this background paper about the independent sector will refer primarily to the 61 regionally accredited institutions that are members of the non-profit Association of Independent California Colleges and Universities (AICCU). Together these institutions, which include such nationally known institutions as California Institute of Technology ("Caltech"), the Claremont Colleges, and Stanford, enroll approximately 95 percent of the students in California's regionally accredited independent institutions. Moreover, through the Association they are represented on the California Postsecondary Education Commission, and since the 1960 Master Plan they have participated actively in the coordination of California higher education.

Most independent colleges and universities are governed by their own boards of trustees to which members are usually elected by majority vote of the board. Leadership in recommending policies and managing the institution is typically taken by the chief executive officer, who is selected by the board, with the faculty assuming major responsibility for academic or educational policies.

In California, "independent" colleges and universities are non-profit institutions and are typically accredited by regional accrediting agencies. "Private" institutions are often profit-making and are licensed in most cases by the State Department of Education. (See pp. 118-120 for discussion of licensure in California.)

Non-Accredited Degree-Granting Institutions: Like other American states, California regulates or oversees non-accredited educational institutions to protect the integrity of degrees issued by non-state-supported institutions. It has three different levels of recognition:

- *Authorization of Theological Institutions:* To ensure religious freedom while providing a minimal level of consumer protection for potential students, California authorizes institutions that award theological and religious study degrees to grant these degrees if they simply (1) publish accurately their goals, programs, and resources and (2) demonstrate that they have $50,000 worth of assets devoted to educational use. As of November 1987, eight schools of theology were so authorized for three-year periods.

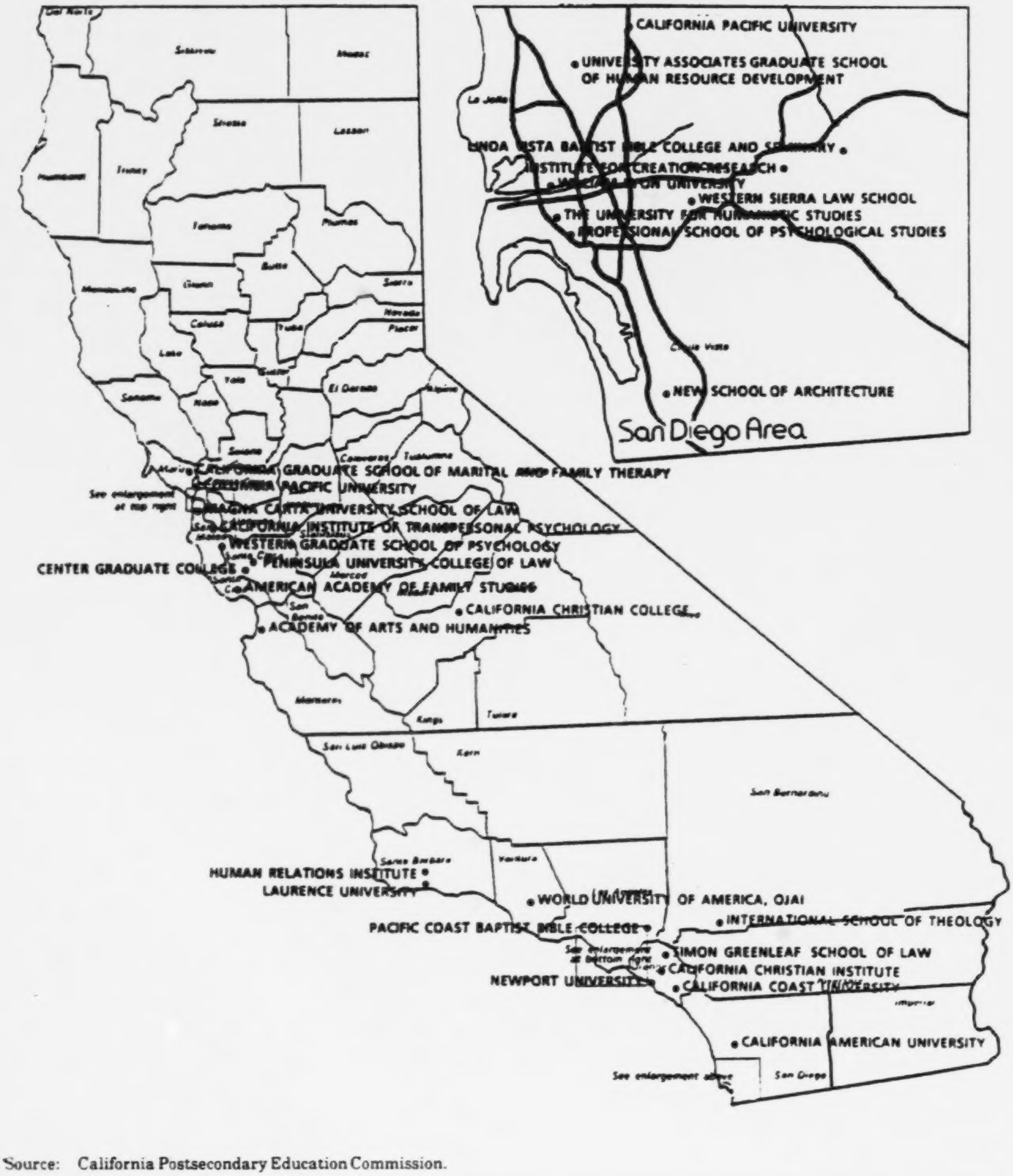
- *Authorization of Other Institutions:* To ensure more consumer protection for students of other authorized institutions, California is in the process of changing from these two minimal standards for those institutions to 13 qualitative standards regarding their objectives, programs, faculty, administrative personnel, academic requirements, record keeping, and physical and fiscal resources. For example, these new standards limit the amount of transfer credit, credit for life experience, and credit by examination that these institutions can award, and they require that these institutions provide at least 25 percent of each student's degree program through instruction by their own faculty members. As of November 1987, 85 institutions were so authorized for five-year periods.

- *Approval of Institutions:* Beyond authorization, the state "approves" non-accredited institutions if it determines that their curricula are "consistent in quality with curricula offered by appropriate established accredited institutions." Of the 71 institutions approved for three years as of November 1987, over half offer doctoral degrees, many of them only in one area, such as psychology or theology. Historically, this approval process has been considered California's highest level of state review, since institutions cannot apply for approved status until they have achieved authorized status. Moreover, the Western Association of Schools and Colleges requires that applicants for its accreditation receive state approval before they are eligible for its review. (Institutions approved by the state as of 1986 are shown in Displays 9 and 10 on the next two pages.)

Non-Degree-Granting Institutions: Thousands of private educational institutions in California prepare high school graduates in specific skills or for specific careers but offer them certificates of attainment or diplomas rather than academic degrees. They range from technical institutes, business schools, and hospitals that offer several career programs to single-purpose schools for such careers as aviation, bartending, cosmetology, income-tax preparation, and real estate sales. According to the most recent data on them (California State Department of Education, 1980, p. 6), the most common courses have been in these fields:

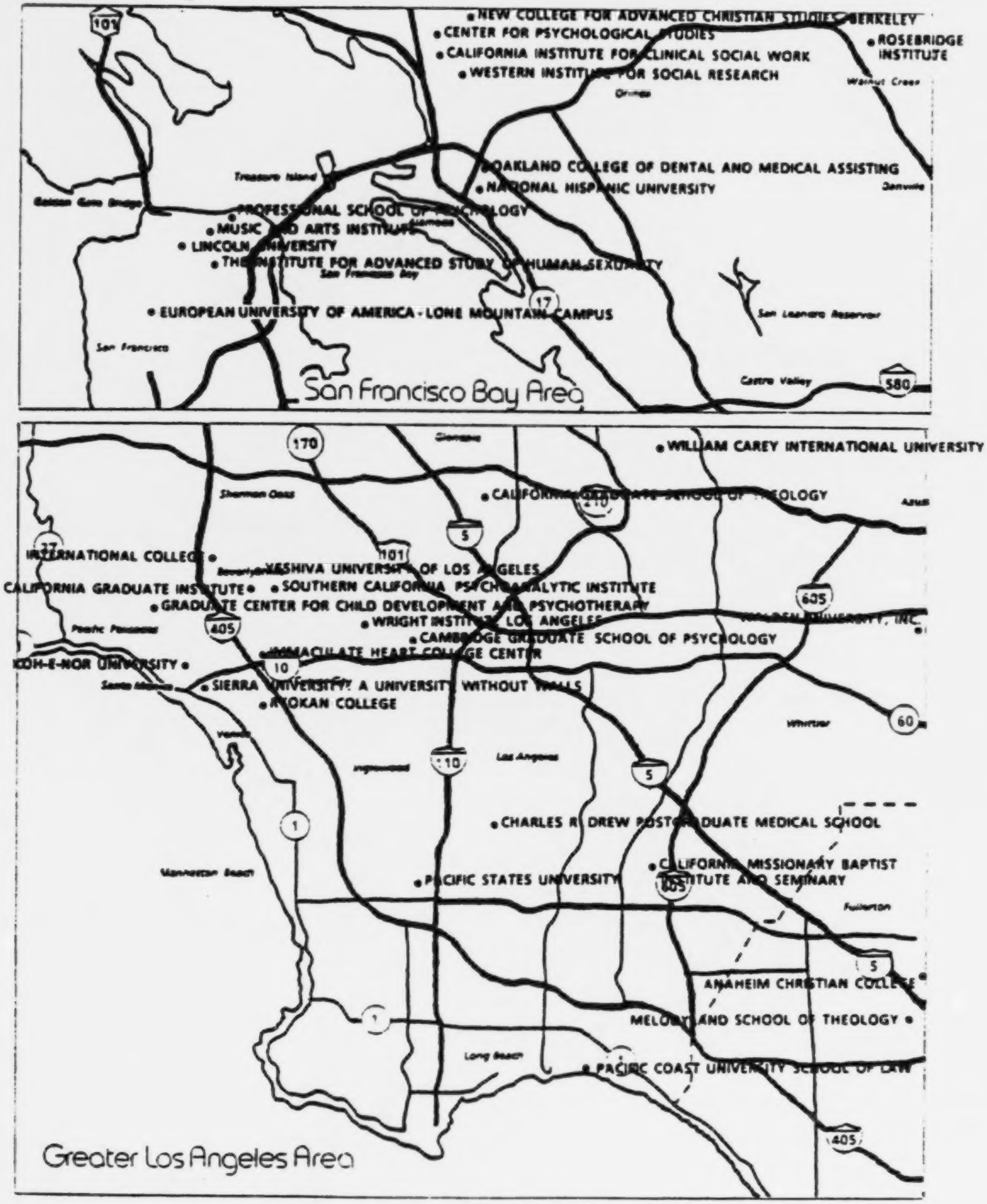
Field of Study	*Number of Courses*
Flight instruction	1,173
Business	768
Real estate salesperson license preparation	437
Cosmetology	181
Insurance agent license preparation	180
Automotive mechanics	178

DISPLAY 9 State-Approved Institutions Outside the San Francisco Bay and Greater Los Angeles Areas


CALIFORNIA PACIFIC UNIVERSITY
UNIVERSITY ASSOCIATES GRADUATE SCHOOL OF HUMAN RESOURCE DEVELOPMENT
La Jolla
LINDA VISTA BAPTIST BIBLE COLLEGE AND SEMINARY
INSTITUTE FOR CREATION RESEARCH
WESTERN SIERRA LAW SCHOOL
THE UNIVERSITY FOR HUMANISTIC STUDIES
PROFESSIONAL SCHOOL OF PSYCHOLOGICAL STUDIES
Chula Vista
NEW SCHOOL OF ARCHITECTURE
San Diego Area
Del Norte
Siskiyou
Modoc
Shasta
Lassen
Humboldt
Trinity
Tehama
Plumas
Mendocino
Glenn
Butte
Sierra
Nevada
Colusa
Placer
Yuba
Lake
Sutter
Yolo
Sonoma
Napa
El Dorado
Alpine
Solano
Calaveras
Tuolumne
Marin
See enlargement at top right
CALIFORNIA GRADUATE SCHOOL OF MARITAL AND FAMILY THERAPY
COLUMBIA PACIFIC UNIVERSITY
MAGNA CARTA UNIVERSITY SCHOOL OF LAW
CALIFORNIA INSTITUTE OF TRANSPERSONAL PSYCHOLOGY
WESTERN GRADUATE SCHOOL OF PSYCHOLOGY
CENTER GRADUATE COLLEGE
PENINSULA UNIVERSITY COLLEGE OF LAW
Merced
AMERICAN ACADEMY OF FAMILY STUDIES
CALIFORNIA CHRISTIAN COLLEGE
San Benito
ACADEMY OF ARTS AND HUMANITIES
Monterey
Kings
Tulare
San Luis Obispo
Kern
San Bernardino
Santa Barbara
Ventura
HUMAN RELATIONS INSTITUTE
LAURENCE UNIVERSITY
Los Angeles
WORLD UNIVERSITY OF AMERICA, OJAI
PACIFIC COAST BAPTIST BIBLE COLLEGE
INTERNATIONAL SCHOOL OF THEOLOGY
See enlargement at bottom right
SIMON GREENLEAF SCHOOL OF LAW
CALIFORNIA CHRISTIAN INSTITUTE
NEWPORT UNIVERSITY
CALIFORNIA COAST UNIVERSITY
Imperial
CALIFORNIA AMERICAN UNIVERSITY
See enlargement above
San Diego

Source: California Postsecondary Education Commission.

DISPLAY 10 State-Approved Institutions in the San Francisco Bay and Greater Los Angeles Areas


101
NEW COLLEGE FOR ADVANCED CHRISTIAN STUDIES-BERKELEY
CENTER FOR PSYCHOLOGICAL STUDIES
CALIFORNIA INSTITUTE FOR CLINICAL SOCIAL WORK
WESTERN INSTITUTE FOR SOCIAL RESEARCH
ROSEBRIDGE INSTITUTE
Walnut Creek
Orinda
Treasure Island
Golden Gate Bridge
OAKLAND COLLEGE OF DENTAL AND MEDICAL ASSISTING
NATIONAL HISPANIC UNIVERSITY
Danville
PROFESSIONAL SCHOOL OF PSYCHOLOGY
MUSIC AND ARTS INSTITUTE
Alameda
LINCOLN UNIVERSITY
THE INSTITUTE FOR ADVANCED STUDY OF HUMAN SEXUALITY
San Francisco Bay
17
San Leandro Reservoir
EUROPEAN UNIVERSITY OF AMERICA - LONE MOUNTAIN CAMPUS
San Francisco
Castro Valley
580
San Francisco Bay Area
170
Glendale
WILLIAM CAREY INTERNATIONAL UNIVERSITY
Sherman Oaks
CALIFORNIA GRADUATE SCHOOL OF THEOLOGY
210
Azusa
27
5
INTERNATIONAL COLLEGE
101
Beverly Hills
YESHIVA UNIVERSITY OF LOS ANGELES
CALIFORNIA GRADUATE INSTITUTE
SOUTHERN CALIFORNIA PSYCHOANALYTIC INSTITUTE
GRADUATE CENTER FOR CHILD DEVELOPMENT AND PSYCHOTHERAPY
605
Pacific Palisades
405
WRIGHT INSTITUTE LOS ANGELES
WALDEN UNIVERSITY, INC.
CAMBRIDGE GRADUATE SCHOOL OF PSYCHOLOGY
IMMACULATE HEART COLLEGE CENTER
KOH-E-NOR UNIVERSITY
10
Santa Monica
SIERRA UNIVERSITY: A UNIVERSITY WITHOUT WALLS
RYOKAN COLLEGE
Whittier
60
Venice
Inglewood
110
Los Angeles
5
1
CHARLES R. DREW POSTGRADUATE MEDICAL SCHOOL
CALIFORNIA MISSIONARY BAPTIST INSTITUTE AND SEMINARY
Manhattan Beach
PACIFIC STATES UNIVERSITY
605
Fullerton
5
ANAHEIM CHRISTIAN COLLEGE
MELODYLAND SCHOOL OF THEOLOGY
1
Long Beach
PACIFIC COAST UNIVERSITY SCHOOL OF LAW
405
Greater Los Angeles Area

Source: California Postsecondary Education Commission.

Contractor license preparation	164
Religious studies	121

These institutions and non-accredited colleges and universities are represented on the California Postsecondary Education Commission through a member of the Council for Private Postsecondary Educational Institutions -- a group of educators and laypersons who advise California's State Superintendent of Public Instruction about the regulation of private postsecondary education institutions.

Higher Education Agencies and Associations

California Postsecondary Education Commission

Created in 1974, the California Postsecondary Education Commission (CPEC) serves as California's state agency to "assure the effective utilization of public postsecondary education resources, thereby eliminating waste and unnecessary duplication, and to promote diversity, innovation, and responsiveness to student and societal needs through planning and coordination."

Of the nine Commissioners representing the general public, three each are appointed by the Governor, the Senate Rules Committee, and the Speaker of the Assembly. They serve six-year terms. The Commissioner representing the independent colleges and universities is appointed by the Governor for a three-year term from a list submitted by the Association of Independent California Colleges and Universities. These ten Commissioners serve beyond the expiration dates of their terms at the pleasure of the appointing individual or body. Five other Commissioners represent the Regents, the Trustees, the Board of Governors, the State Board of Education, and the Council for Private Postsecondary Educational Institutions (a group advisory to the Superintendent of Public Instruction). These Commissioners serve at the pleasure of their respective boards with no fixed term.

The Commission has a staff of some 50 state employees and offices in Sacramento, and is headed by its executive director who is appointed by the Commission. At regular intervals the executive director meets with an advisory committee -- the Statutory Advisory Committee -- composed of high-level staff from the segments. They advise the Commission and the executive director and often serve as a steering committee for major studies or reports, such as this background paper.

California State Board of Education

The State Board of Education is the ultimate governing and policy-making body for the State Department of Education and for the schools of the state. The Governor appoints its 11 members for four-year terms. The State Superintendent of Public Instruction, who is elected by the people of California as a constitutional officer of the state, serves as the Board's secretary and executive officer of the State Department of Education. Staff members of the Department of Education, which employs some 2,800 individuals, work actively with the higher education segments in coordinating segmental programs with the public schools.

California Student Aid Commission

The California Student Aid Commission is California's state agency that administers federal and state grant and loan programs, conducts research on student needs and programs, develops criteria for distributing available aid funds, and distributes information about available aid to potential applicants. The nine Commissioners represent the several segments of education in California as well as the general public. They are appointed by the Governor for four-year terms, except for the student member who serves a two-year term. The Commission's staff of approximately 200 state employees has offices in Sacramento.

Council for Private Postsecondary Educational Institutions

The Council for Private Postsecondary Educational Institutions advises the Superintendent of Public Instruction regarding private postsecondary education in California and, in particular, state approval or authorization of private non-accredited institutions for degree-granting purposes.

Most members of the Council serve four-year terms and are appointed by either the Senate Rules Committee, the Speaker of the Assembly, or the Superintendent of Public Instruction. Three ex officio members represent the California Postsecondary Education Commission, the State Department of Consumer Affairs, and the State Department of Employment Development. Staff work for the Council is undertaken by the Private Postsecondary Education Division of the State Department of Education, whose staff of 30 state employees in Sacramento and Los Angeles carries out provisions of the California *Education Code* regulating the granting of academic degrees within California.

Western Association of Schools and Colleges

The Western Association of Schools and Colleges (WASC) is the recognized regional accrediting association for California, Hawaii, American territories in the Pacific, and areas in the Pacific and East Asia where American or international schools or colleges operate. Its purpose is to promote the welfare, interests, and development of education in the region through (1) the improvement of educational programs; (2) close cooperation among the region's schools, colleges, and universities; (3) certification of institutional accreditation or candidacy status; and (4) effective working relationships with other educational organizations and accrediting agencies.

Three accrediting commissions operate as part of the Association: one for high schools, a second for community and junior colleges, and a third for four-year colleges and universities. The Accrediting Commission for Community and Junior Colleges consists of 17 members and is served by a small staff located in Aptos, California. The Accrediting Commission for Senior Colleges and Universities consists of 18 members appointed by the Western College Association and has a small staff headquartered in Oakland, California.

Accreditation is a means of voluntary non-governmental review by educators to assure that the operations of a college or university reflect educational quality. Accredited institutions meet the standards of quality set by the agencies that have accredited them, and they enjoy wide acceptability of their credits by other institutions. Accreditation not only certifies that an institution meets established educational standards; it serves as an aid to institutions in improving their operations beyond these standards, both by requiring institutional self-studies of programs and problems and also by periodically sending educators from other institutions to visit the campus for reaccreditation and to offer suggestions for improvement.

Two Master Planning for Higher Education

IN 1959-60, when the historic *Master Plan for Higher Education in California, 1960-1975* was developed, reviewed, and implemented, master planning for state systems of higher education was not an institutionalized, continuing process in the United States. Certainly this was the case in California, which had undertaken a series of careful studies of higher education; but these studies had been done on no particular schedule, and none of them had produced far-reaching changes in the state's system of higher education. These studies provide a context for examining higher education policy in California, however, not only because many of their recommendations were incorporated in some form into those of the Master Plan but also because their approach differed so greatly from that used by the state in reviewing the Master Plan since 1960.

Studies Prior to the Master Plan

Before 1960, state policy for California higher education was set by the Legislature, Governor, and the two statewide boards that governed public colleges and universities -- the State Board of Education, which oversaw the seven state colleges and coordinated the 55 junior colleges, and the Regents of the University of California, which oversaw its four campuses at Berkeley, Los Angeles, Davis (primarily an agricultural campus), and San Francisco (a specialized medical campus), and specialized facilities at Riverside (agriculture) and La Jolla (oceanography). In 1945, these two boards created a Liaison Committee to assure coordination between them.

In 1947, the Legislature authorized the Liaison Committee to undertake a survey of the needs of California for higher education and to report back to the Legislature in 1948. The results of that survey, *A Report on a Survey of the Needs of California in Higher Education, 1948*, became known as the "Strayer report" because of its principal author, George D. Strayer, a professor at Teachers College, Columbia University.

Strayer and his colleagues wrote their report against the backdrop of greatly expanded enrollments in higher education caused by the large number of service personnel returning from military duty. In addition, there was considerable concern about efforts in the Legislature to expand local community colleges into four-year institutions. Strayer surveyed the needs of the state and recommended the expansion of each type of institution. Two new state colleges would be needed in Sacramento and Los Angeles; the Riverside facility of the University should be expanded into a full-fledged campus; and four new junior colleges should be created (Strayer, Deutsch, and Douglass, 1948). Little resulted from the report, however, beyond the authorization in 1951 of four new state colleges in Los Angeles, Long Beach, Pomona, and Sacramento, and the expansion in 1954 of Riverside into a regular University campus.

In 1954-55, responding to another legislative request, the Liaison Committee again reviewed the state's needs for higher education under the leadership of T. R. McConnell of the University of Buffalo. That comprehensive report, *A Restudy of the Needs of California in Higher Education,* was significant because it included not only a number of important concepts -- such as differentiation of function, achievement requirements for community college transfer students, and the planning and development of the University and the state colleges as integrated systems -- that later became part of the Master Plan but also the recommendation that the entire field of higher education be reviewed in 1960. Other recommendations called for the state colleges to be permitted to offer master's-level training not only in education but in a wide variety of fields, for the University to have the exclusive right in public higher education to award the doctorate, and for a separate board to govern the state colleges in order to facilitate their integrated planning (McConnell, Holy, and Semans, 1955).

As part of the buildup to the Master Plan, and a significant factor in the eventual acceptance of virtually all its important recommendations, was the constant and totally uncoordinated efforts of legislators to develop various junior colleges into four-year institutions or to authorize new four-year institutions throughout the state. In 1955, bills introduced in the Legislature could have authorized an additional 19 state colleges to the ten-college system. These wholly unplanned efforts, motivated by local interests and unrelated to any state plan or assessment, raised alarm in educational circles and caused the staff of the Liaison Committee to undertake a study to ascertain what statewide needs might be for new institutions. Probably the most significant proposals in their 1957 report, *A Study of the Needs for Additional Centers of Public Higher Education in California*, were a series of principles to guide the expansion of higher education. These embraced (1) differentiation of function, (2) adequate coverage of the entire state by community colleges before authorization of additional four-year campuses, (3) due consideration of the needs of existing institutions in planning new ones, and (4) restriction of publicly-supported institutions in areas long and well served by private institutions (Semans and Holy, 1957).

Thus by the time the Master Plan study was authorized, the intellectual groundwork existed for much of its significant recommendations. Moreover, the pressures for some lasting framework within which California's system of higher education could develop in a relatively orderly way had been building in the Legislature and in educational circles. In the Legislature's 1959 session, the flurry of activity to change higher education on the basis of local self-interest included 23 bills, three resolutions, and two constitutional amendments either establishing new campuses or authorizing studies of the need for them, adding new functions to existing institutions, or changing the governance or structure of higher education. Contributing to the concern that government officials shared over ways of providing new educational services in an orderly fashion was the growth occurring throughout the state. Population was soaring and transforming California from a primarily agricultural state to a highly populous society with an increasingly diverse and complex economy.

To deal with these increasingly serious needs, the Legislature approved a number of measures, one of which was Assembly Concurrent Resolution 88 of requesting the Liaison Committee to have prepared a Master Plan for Higher Education. These actions were part of a growing consensus that saw taxpayer groups declaring that such costly activities as public higher education should be expanded on the basis of sound principles, and the two governing boards of higher education calling for control and limits over authorization of new institutions. The time was propitious for a systematic review of policies that would guide California in the direction of an efficient expansion of higher education services. The challenge was to meet the needs of the unprecedented numbers of students at high levels of quality without unnecessary duplication of effort.

The Master Plan for Higher Education in California, 1960-1975

Arthur Coons, long-time president of Occidental College and chair of the 1960 Master Plan Survey Team -- the group directly responsible for the preparation of the Master Plan -- noted that the very heart of the plan was its series of decisions relating to the structure, function, and governance of the segments. It was his view that the concerns of the state's legislative and educational leaders centered primarily on the future roles of the public segments *and* the independent sector, and how the public segments should be governed and coordinated to avoid duplication and waste. For this reason, the eight members of the Master Plan Survey Team reserved to themselves the areas of structure, function, and coordination, while using other committees for study and advice on the other elements of the review.

A number of major elements of the Master Plan are still shaping the nature of California higher education today, among them these nine:

1. The plan established universal access to higher education in California as public policy by specifying a place somewhere in the system for all qualified and motivated students. Central to this recommendation was the open access role of the community colleges, where students capable of benefiting from instruction could attend and later transfer to a four-year institution after demonstrating satisfactory performance.

2. It assigned the segments differentiated functions or broad roles within which each was to strive for excellence:
   - The University of California was to have particular emphasis on graduate and professional programs, with exclusive jurisdiction in public higher education over instruction in law, and graduate instruction in medicine, dentistry and veterinary medicine. It was given sole authority in public higher education to award the doctoral degree but could agree to award it jointly with the state colleges.
   - The state colleges were to have as their primary function undergraduate instruction and graduate instruction through the master's degree. While the University of California was the primary state-supported academic research agency, the Master Plan authorized faculty research at the state colleges consistent with their primary function of instruction.
   - Junior colleges -- today's "community colleges" -- were allowed to offer instruction up to *but not beyond* the fourteenth grade level. They were to offer instruction in courses for transfer to four-year institutions, vocational and technical instruction, and general or liberal arts courses.

3. It recommended and the Legislature established a statutory coordinating body -- the Coordinating Council for Higher Education. This decision marked a move away from the voluntary coordination previously conducted by the segments through the Liaison Committee.

4. It proposed a governing board for the state colleges separate from the State Board of Education -- a board now known as the Trustees of the California State University. Appointed members of the board serve eight-year terms, and their performance over the years have proven the wisdom of providing a separate governing mechanism for the system. They have overseen major growth within the system and have worked closely with the state to provide substantially greater degrees of flexibility in administering the affairs of the system.

5. It established differential admission pools for the University and the state colleges. The University was to select students from the top 12½ percent of the graduating seniors of public high schools in California, while the State Colleges were to draw their students from the top 33⅓ percent. In addition, the plan established standards for transfer students by requiring that those who had not been eligible for admission to the University or the State Colleges upon graduation from high school were to complete essentially the first two years of college before transferring. All of these actions were designed to improve quality in the system, since each represented a tightening of admission standards.

6. It reaffirmed the principle that the University and the state colleges were to be tuition-free for residents of the state.

7. It devoted a number of recommendations to strengthening the junior colleges and extending their coverage throughout the state. Those State Colleges operating two-year programs were to phase them out by 1964, and the University and the state colleges were to reduce their lower-division enrollments in relation to upper-division enrollments so that by 1975 the relationship would be 41 percent lower-division to 59 percent upper-division. Other policies to be emphasized would divert some 50,000 students to the junior colleges by 1975. Finally, no new state colleges or University campuses, other than those already authorized, were to be established until adequate junior college facilities were provided throughout the state.

8. It defined junior colleges for the first time as part of the higher education system, although it declared they were also to be part of the public school system in order, for example, to continue to receive federal funding for vocational education.

9. It assured representation of independent institutions on the new coordinating agency, and their representatives have remained effective members of the agency ever since. Moreover, the plan called for the expansion of the fledgling State Scholarship Program (approximately $1.2 million in 1959-60) for qualified applicants, a subsistence grants program, and a Graduate Fellowship Program -- all proposals that would permit student choice of institution. Finally, the plan rejected a "superboard" or single board to govern the University and the State Colleges -- an option debated by the Survey Team at one point or another -- because independent institutions would have been left out of the coordinating system (Master Plan Survey Team, 1960).

These recommendations constituted a major achievement for the drafters of the Master Plan. Because of them, the plan is now regarded as one of the most influential studies in the history of American higher education. As recently as 1987, Frank Newman, President of the Education Commission of the States -- America's voluntary interstate advisory board for education -- observed how fortunate California had been in having a viable policy of differentiation of function, since it has avoided the costly annual battles for expansion of segmental missions seen so often in other states. Also, the establishment of the Trustees has been a major factor in the continued growth and development of the system, due no doubt to the undivided attention of a board responsible only for the system.

Among detractors of the plan, one of the most outspoken was Owen Albert Knorr, director of the Coordinating Council for Higher Education that was created under it, who criticized it in 1970 as providing "something for everybody" and for being too detailed, for lacking goals for the state system, and for failing to provide statewide planning. Consequently he saw it as a liability that needs to be reformed to provide for a viable planning function.

Certainly one major omission of the plan was its failure to provide for a statewide community college board. Such a recommendation may have been impossible to include in a report that already called for removing the state colleges from the control of the State Board of Education. In any event, the Board of Governors of the Community Colleges were subsequently established by the Legislature in 1967.

In addition, it must be concluded that the plan recommended an unrealistic form for the new Coordinating Council -- a 12-person board, wholly composed of segmental representatives. As established by the Legislature, the Coordinating Council had 12 institutional representatives and three members of the general public, but by the time the Council was replaced by the Postsecondary Commission, these proportions were adjusted to assure a public majority.

Finally, the plan's major provisions, such as differentiation of function and the creation of the Trustees, were not enacted into the State Constitution as originally proposed by the Survey Team. Instead, they were enacted into statute because of the reluctance of the Legislature to absorb the loss of control that would have occurred had they been placed in the Constitution.

These were relatively minor failures, however, when judged against the plan's many successes; and overall, the bulk of the plan's 67 recommendations were adopted either by the Legislature or the segments.

Subsequent Master Planning Efforts

With the 1960 Master Plan, California entered a new era of periodic master.planning at the state level. In one form or another, the two master planning cycles that have followed (1971-73 and 1985-88) have proceeded in the mold established by the plan. In fact, the two subsequent studies have been in very large measure reviews of the plan and the need to add to or change portions of it.

The 1971-73 Joint Committee on the Master Plan for Higher Education

The review by the Legislature's Joint Committee on the Master Plan for Higher Education from 1971 to 1973 was the first study of its kind to be done entirely by the Legislature. The form of the study was in part necessary because of the criticism of the segments growing out of the student unrest of the late 1960s and early '70s. It was true, also, that the sheer size of the higher educational enterprise and the massive cost to the state to maintain it called for an assessment directed from outside the system. In any event, the Joint Committee expressed no interest in intruding on the day-to-day operations of the system and strove instead to focus on public policy issues, such as those raised by Albert Knorr regarding inadequate statewide planning and the need for periodic reassessment of any plan. Rather than abandoning the 1960 Plan, the Joint Committee by and large reaffirmed it, acknowledging that its significance was "virtually unchallenged in California and throughout the nation and the world" (1973, p. ii).

In retrospect, the Joint Committee can be seen to have focused on four primary areas: (1) access and educational equity for ethnic minorities and women; (2) coordination and planning; (3) governance; and (4) diversity within the system.

- *Access and Educational Equity:* Access was an area not fully developed in the original Master Plan, which established an open-access system but did not explore the specific access problems encountered by ethnic groups and women. By 1973, as the Joint Committee noted, Blacks, Mexican-Americans, and Native Americans constituted 23 percent of the state's population, but only 18 percent of students at community colleges, 12 percent of those at the State University and Colleges, and 11 percent of those at the University. The Joint Committee saw clearly that access was a high priority for the state and to address it successfully the state would need to deal with barriers to college attendance, such as income levels, geographic location, age, articulation, and inadequate information to inform student choice. Significantly, the Committee reaffirmed the commitment of the state to provide an appropriate place in public higher education for every student willing and able to benefit from attendance. It recommended goals whereby the segments would strive to approximate by 1980 the "general ethnic, sexual, and economic composition of the recent California high school graduates." Also, it recommended continued adherence to the 40:60 enrollment ratio in the four-year public segments to facilitate transfer.

- *Coordination and Planning:* The major coordinating and planning recommendations of the Joint Committee were those calling for the replacement of the Coordinating Council for Higher Education by a new California Postsecondary Education Commission, since the Council "had never fulfilled the function of statewide planning and policy development and has never been equipped to do effective statewide coordination" and "there is little indication that the Council can become the effective instrument needed for coordination and planning" (p. 22). In the Joint Committee's opinion, the dominance of the chief executive officers of the segments was the major flaw in the Coordinating Council's structure. To avoid this dominance, the Committee recommended that employees of postsecondary educational institutions be prohibited from serving on the Postsecondary Education Commission -- thus effectively eliminating the chief executives -- and that representatives of the public should outnumber institutional representatives. Further, these public representatives were to be appointed equally by the Governor, the Assembly, and the Senate -- a response to the charge that the Coordinating Council had been dominated by appointees of the Governor.

  The new Commission was to be broad and diverse in its membership and embrace the full spectrum of postsecondary education; that is to say, it would include institutions such as private postsecondary education schools that were not traditionally considered part of higher education. Moreover, it was to have an explicit mandate from the Governor and the Legislature to carry on a continuous planning process that would entail the preparation of a five-year plan for higher education to be updated annually. The continuous planning process would supplement long-range master planning, which the Joint Committee recommended be undertaken every ten years by the Legislature.

- *Governance:* In terms of governance, the Joint Committee recommended retaining the tripartite system of public higher education and the governing boards that were an integral part of the system. This is not to say that the Committee was happy with what was seen as a failure to pursue vigorously improved coordination and cooperation among the segments. However, on the one hand it rejected a superboard for California, since it saw

California higher education as already overly bureaucratic and monolithic, and on the other hand it rejected replacement of the multi-campus system boards by individual boards for each institution because they would introduce "chaos and anarchy" in budgeting and policy-setting for the system, even though they might humanize the scale of the institutions. Thus the Joint Committee settled on the existing system in hopes of strengthened coordination through the Postsecondary Education Commission, but it recommended that (1) the governing boards should become more broadly representative of the population, including ethnic groups and women, (2) faculty and students should be represented on the governing boards, and (3) terms of the Regents of the University -- then 16 years -- should be reduced to eight years.

- *Diversity:* Under the broad heading of diversity, the Joint Committee looked at the mission and functions of the segments, the need for new delivery systems in higher education, and the role of the independent institutions. Although it offered considerable comment on the missions and functions of the segments, it recommended no significant change in them. It cautioned the University to provide for the pursuit of excellence in teaching as well as research, and it took note of the recent addition of the word *University* to the name of the California State University and Colleges, but it did not interpret that change as implying a change of mission. However, to further greater diversity throughout public higher education, it recommended that each campus prepare its own mission statement; and because it viewed the basic delivery system of higher education as traditional college attendance, it recommended creation of a fourth public segment that "should have the primary responsibility for planning and coordinating off-campus programs and should be authorized to offer its own programs and award credits and degrees" (p. 57) but that would have no campuses. Finally, the Committee devoted an entire chapter of its report to the independent institutions, which it saw as having unique opportunities for innovation and experimentation, and which diverted large numbers of students who might otherwise enroll in public institutions at direct cost to the taxpayers. The Committee recommended that independent institutions be encouraged to participate voluntarily in statewide cooperative programs and continue to be represented on the Postsecondary Education Commission, which should issue annual reports on their financial and enrollment condition. It also proposed that the state provide additional financial aid to students, who could then use it at the institution of their choice.

After the Legislature had enacted certain recommendations of the Committee and rejected others, it was clear that on balance the Committee had substantial influence on the future of California higher education. It is true the basic structure of governance remained, as did the missions and functions of the segments, and the proposed fourth segment of public higher education was rejected. However, a new and stronger agency emerged with a particular responsibility for planning and a larger mandate for coordination. Most importantly, access was established as a prime goal for the future, and admission goals and priorities enacted as statements of legislative intent. Student and faculty representation was accomplished on the governing boards, and a policy agenda set forth for the coming decade.

The 1985-88 Review of the Master Plan

The current and ongoing review of the Master Plan commenced in March of 1985 with the first meeting of the state's Commission for the Review of the Master Plan for Higher Education, and is expected to end in March of 1988 with the report of the Legislature's second Joint Committee for Review of the Master Plan. This review differs from earlier studies in two important respects:

- First, it has involved these two groups -- (1) the Commission of 16 lay members, with five segmental representatives, four appointees of the Governor, and three appointees each by the Speaker of the Assembly and the Senate Rules Committee, and one representative of the Postsecondary Commission, that received background reports and staff briefing papers; and (2) the Legislature's Joint Committee that is reviewing these reports, conducting hearings, and preparing recommendations for the Legislature.
- Second, the review has been conducted in two phases, the first of which involved only a reassessment of the community colleges and the second a review of the Master Plan and state higher education in general, including intersegmental aspects of community college governance, mission, and accessibility. By March 1986, the Commission for the Review of the Master Plan completed Phase One, and it completed Phase Two in July 1987; but the Joint Committee will not finish its own work on Phase Two until this spring.

Phase One: In Phase One of the study, the Commission for the Review of the Master Plan met 22 times in open session and held six public hearings. At these meetings, Commissioners heard from educational experts, legislators and legislative staff, faculty, and students, as well as receiving comments and advice by members of the audience. In addition, it encouraged individuals and organizations to submit written comments.

In the Commission's 1986 report from Phase One, *The Challenge of Change*, it covered a broad range of community college issues and suggested a number of policy changes, including:

- *Access and Success:* It noted that the community colleges are the principal point of entry to postsecondary education for most Californians and particularly for underrepresented students. It suggested that in view of the changing demographics of California, providing access handles only half of the task; the other half "is to improve the probability of success for every student" (p. 5). Consequently, it reaffirmed open access policy for the colleges and endorsed a mandatory assessment, counseling, placement and follow-up program along with the provision of clearly defined academic standards, including minimum academic skill levels, and remedial programs to help students succeed.

- *Mission and Function:* The Commission reaffirmed the primary functions of the colleges as associate degrees, transfer, and vocational education. It identified remedial education as an "important" function but linked to access as a bridge to success. It identified adult education and community education as "authorized" functions, but stipulated that the latter should remain self supporting. It proposed that the public segments should collectively develop and maintain a general education core curriculum that, along with courses required for the majors, would assure transfer to the four-year segments when successfully completed; and it invited independent institutions to participate in this core curriculum discussion. It urged that some community colleges be permitted to be designated as specialized technical centers where access was available to other comprehensive colleges; and it recommended that these technical colleges, and indeed all community colleges, work closely with local business and industry to meet the economic development training needs of their communities.

- *Remediation:* The Commission agreed that remedial education should be provided to help students succeed and that enrollment in remedial courses should be mandatory when assessment results indicate remedial needs, but it held that such courses should not carry degree credit. It endorsed 30 semester or 45 quarter credit units as an upper limit on the number of units of remedial courses students should be allowed to take, although it exempted English as a Second Language students from this credit limitation.

- *Faculty and Administrators:* Noting that California is the only state to retain a system of credentialing for community college faculty and administrators developed for the public schools, the Commission recommended new qualifications for faculty and administrators as well as peer review of new faculty. In a number of ways, the Commission urged adoption of policies to allow for greater faculty involvement in college governance, particularly in such areas as faculty appointment, promotion, and tenure. It directed other recommendations to reducing heavy reliance on part-time faculty and to incorporate part-time faculty into the collegial faculty process.

- *Governance:* In a variety of areas, the Commission suggested strengthening the Board of Governors' authority. It suggested adding the Governor, the Lieutenant Governor, the Speaker of the Assembly, the Superintendent of Public Instruction, and the Chancellor to the Board as *ex officio* members. To provide a greater measure of security from legislative intrusion, it proposed that the Board have the power to allocate state funds to the districts rather than using legislative apportionment bills for this purpose and that the Board be empowered to decide the location for the Chancellor's Office; and it urged that the Chancellor be allowed to select the Office's staff without restrictions imposed by the state civil service system. On the thorny question of the powers of local districts relative to the Board and the Chancellor, however, the Commission deferred action until Phase Two of its study.

- *Finance:* In a number of recommendations, the Commission suggested that a more flexible and appropriate system of budgeting be established for the colleges. It proposed abolition of the average-daily-attendance workload measure for funding the colleges and its replacement with the full-time-equivalent student unit used by the University and State University, and it advocated redesigning the funding system to bring factors such as cost into the funding formula along with enrollment.

In one form or another, the Legislature's Joint Committee for Review of the Master Plan endorsed most of these recommendations and incorporated them into legislation that has progressed through the legislative process but will not be enacted until later in 1988. At that time, it is hoped that the Governor and the Legislature can reach agreement on key questions of community college finance and governance. (Chapter Nine on the community colleges offers more detailed discussion of these issues.)

Phase Two: Phase Two of the process -- the review of the total Master Plan -- has followed much the same pattern as Phase One. The Commission for the Review of the Master Plan held 14 two-day open meetings and public hearings as well as a four-day session devoted to presentations by the chief executives of the segments and other distinguished academics and a three-day retreat for Commissioners during which they established the Commission's remaining agenda. In the Commission's report from Phase Two, *The*

Master Plan Renewed, it grouped its recommendations around four principal goals for the system: unity, equity, quality, and efficiency. Appendix A reproduces the complete text of these recommendations, but they can be summarized as follows:

- *Unity:* The Commission saw strength in the various elements of California's system of postsecondary education but concluded that the needs of an increasingly diverse population required greater cooperation. "Above all, there must be a policy consensus that from preschool to doctorate, public and private, we are one system" (p. 7). Identifying the Governor and Legislature as providing policy formation for the system and the Postsecondary Education Commission as providing essential evaluation services, it proposed that the California Education Round Table -- an informal association of the chief executives of the major sectors of California education -- be responsible for providing needed operational linkage. In a number of recommendations, the Commission addressed the public schools as a "segment" -- a term usually associated with elements of the postsecondary education system -- and the need for greater unity between that segment and those of higher education. In the area of mission and function, it did not propose changing the major features of existing state policy, but it suggested a number of changes in the statement of community college function (discussed above in Phase One), including giving them "principal but not exclusive responsibility for vocational education." It proposed a substantial change for the State University in advocating that "research, scholarship, and creative activity . . . in support of the instructional mission . . . shall be supported by the state." It indicated that the State University should have particular responsibility for research in public school instruction and in educational technology, in recognition of the role its campuses play in training teachers. It left the University of California's functional statement largely untouched, but it included for the first time a very general functional statement for independent institutions.

  The Commission proposed no major changes in admission policies, but it recommended that the University and State University "maintain lower-division enrollment systemwide at no more than 40 percent of total undergraduate enrollment" and that the University reduce enrollment in the lower division so as to reach this 40 percent goal by 1995-96. (The State University is already within the parameters of the recommendation.) It urged that the transfer function be recognized "as a central institutional priority for all public segments," and it suggested a number of policies to strengthen this function through actions by the four-year segments, provision by the community colleges of quality transfer programs, effective articulation among programs, and greater partnership among the segments.

In the area of community college governance, it recommended that the Governor and the Legislature specify that the California community college system is "to be administered as a unified state-local system by the Board of Governors with broad policy-making and management responsibilities in both academic and financial matters" and acknowledge the community colleges as postsecondary institutions rather than as part of the public school system.

- *Equity:* The Commission held that educational equity must be a principal commitment of the segments, that the public segments should embark on programs to diversify faculties through recruitment of women and minorities, and that independent institutions should participate in these efforts. It proposed that the state guarantee enough student financial aid to optimize student choice among institutions and increase aid to keep pace with enrollment growth and regularly raise the amount of maximum awards to keep up with costs. It urged that the problem of over-reliance on loans, as opposed to grants to students, be addressed and that particular attention be paid to older, part-time students who desire to pursue the baccalaureate degree.

- *Quality:* The Commission suggested that the governing boards of the segments make teacher education one of the highest institutional goals as a way of ensuring quality in the public schools and that these boards assure quality and coherence in the undergraduate curriculum in their segments. It proposed that the segments assure that faculty and teaching assistants have the necessary instructional skills and that because of the growing importance of instructional technologies, governing boards should see they are integrated into institutional mission and that the State University assume particular responsibility for research in instructional technology. Finally, it recommended that regional accrediting commissions "take sufficient cognizance of student 'outcomes' in evaluating institutions."

- *Efficiency:* The Commission assigned major responsibility for long-range planning to the Postsecondary Education Commission and noted that such planning should be based on common definitions and common assumptions and should involve review of segmental long-range planning activities. It urged the Postsecondary Education Commission to review the proposed growth of existing campuses and the need for additional centers in light of their appropriateness to segmental missions, review methods of controlling state-supported costs of postsecondary education, explore ways that unused capacity among independent institutions might be used to accommodate enrollment growth, and examine regularly the budget formulas used by the state to support the public segments.

So far in the current Master Plan review, the focus of discussion has revolved around four general topics: (1) the ways in which the California Community Colleges should be financed and governed and how they and the four-year institutions can bolster the transfer function; (2) quality of undergraduate programs in the University, the State University, and the community colleges; (3) assessment and evaluation as ways of measuring quality; and (4) the coordination of higher education and of higher education with the public schools. All four of these themes will most likely figure prominently in legislative discussions as the Joint Committee for Review of the Master Plan completes its work during 1988.

Differences Among the Approaches to Master Planning

California's three major master planning reviews of 1959-60, 1971-73, and 1985-88 have differed significantly in several ways. One major difference is their duration. The original Master Plan study was by far the fastest of the studies. It was authorized on April 15, 1959, by the Regents and the State Board of Education, and its report was presented in final form to these same boards eight months later in December of that year. In contrast, the study of the Joint Committee on the Master Plan for Higher Education started with the formation of the Committee in March 1971 and concluded 30 months later when the final report was transmitted to the Legislature on September 15, 1973. The current study, requiring a two-phase study by a public commission and a joint legislative committee, has encompassed 36 months from the first meeting of the Commission for the Review of the Master Plan in March 1985 to the anticipated final report of the Joint Committee for Review of the Master Plan in March 1988.

Among other differences worth noting are their personnel. The 1959-60 study was conducted wholly by persons associated with the institutions of higher education or the governing boards. In all, 100 persons participated in the preparation of the Master Plan report, collateral reports, or the work of the various study groups. In contrast, the 1971-73 study was an exclusively legislative effort, although the Joint Committee commissioned studies by academics and others, and a lay group appointed by the Coordinating Council for Higher Education worked with consultants to produce its own report on higher education. (The work of that group may have influenced the thinking of the Joint Committee, but the final report of the Joint Committee differed sharply from the group's findings.) The current review has been a dual effort by the lay Commission for the Review of the Master Plan and the Legislature's Joint Committee. This juxtaposition of the lay study group and the legislative committee is a unique configuration in the history of

California's master planning efforts, and it may have stemmed from the weak consensus underlying the authorization of the review. Sentiment varied widely in 1984 as to the breadth of the review and whether it should focus entirely on the community colleges or entail a complete look at higher education. Moreover, the degree of gubernatorial influence on what the 1973 study had declared to be a legislative responsibility necessitated some measure of compromise and involvement of gubernatorial appointments, with the resulting compromise to study both the community colleges and the entire system by using a lay commission as well as a legislative committee.

In preparing the 1960 Plan, the Master Plan Survey Team met privately and had no audience or press coverage. In 1971-73, the Joint Committee engaged in a broad consultative process embracing 22 public hearings, a survey of institutional goals of nearly 25,000 persons and 121 institutions, and a mailing list of 4,500 persons and organizations. The current study has included a number of public hearings and active participation by the audience at regular meetings of the Commission for the Review of the Master Plan plus public hearings by the Joint Committee, but its methods have fallen between the two poles of consultation used in the previous studies. The emphasis on consultation of the 1971-73 study reflected not only considerable suspicion of the segments -- a not uncommon sentiment in the tempestuous climate of the late '60s and early '70s, when California campuses had been disrupted by student unrest -- but also demands for greater access to the decision-making process from many groups both within and outside higher education. This exhaustive consultative process is likely to be replicated in some modest form in future studies, including the one proposed for early in the twenty-first century to cover all levels of California education, as suggested by J. Gary Shansby, the chairman of the recent Commission for the Review of the Master Plan.

Conclusion

If the experience of the last 27 years is any guide, California seems to have acknowledged that periodic evaluations of its total system of higher education are necessary to validate its 1960 Plan, to endorse new policies as needed, and in particular to ensure the interrelationship of the various parts of the system. These important linkages are what make California's system of colleges and universities a system, but they rarely receive close attention in regular legislative hearings where attention is focused on individual bills, annual appropriations, and yearly program augmentations. Thus into the foreseeable future, California will probably undertake major master planning projects in postsecondary education every 10 to 12 years, typically at the initiative of the Legislature or Governor or both; and these reviews will involve the energies of higher education officials for not less than two years at a time.

Three Financing Higher Education

STABLE funding is an essential element in the resources on which institutions must draw to provide a wide range of high quality programs to students and the community; and without stability of funds, institutional planning and expansion are severely constrained.

This chapter reviews funding for California's three four-year segments of higher education, sketches the broad outlines of student fees and financial aid, and examines areas of higher education funding needing attention in the next few years. (Chapter Nine discusses community college financing along with other community college issues.)

Levels and Sources of Support

In recent years, the funding picture in California higher education has been very mixed, although funding has been substantially improved since 1983, except for the community colleges. Higher education finance in recent years has been dominated in many ways by the efforts of the state to adapt funding mechanisms to major changes in taxing and spending policies brought about by the adoption of various electoral initiatives, the most significant of these being Proposition 13 of 1978 limiting property taxes and Proposition 4 of 1979 -- the "Gann ceiling"-- limiting state appropriations. This same decade has seen substantial increases in student fees in all segments, agitation for and adoption of the state's policy endorsing moderation and predictability in fee increases, and a steady withdrawal of the federal presence in (and emphasis on) student financial aid. Nationally, the preoccupation with tax reform and containment in nearly every state, combined with the attention directed to controlling massive budget deficits in Washington have served to shift from the federal government to the states decision-making power over programs for which budget responsibility has devolved to the states.

Although the overall picture for levels of funding in California is comparatively favorable, with the state's economy expected to perform better than most states, the challenges ahead are great. Access must be assured throughout the system, and excellence preserved and promoted. Higher education must contribute to the preservation of living standards in the new climate of economic competitiveness. Most importantly, colleges and universities must respond to the pervasive changes associated with the new population mix. Many doubt whether higher education can meet these challenges effectively within the context of the "Gann ceiling."

In contrast to academic institutions in some other countries, American colleges and universities rely on support from a multitude of sources, both public and private, including state and federal governments, student fees, alumni contributions, and private philanthropy. Within California's public sector of higher education, the University of California has the most varied sources of financing, as a direct result of the complexity of its mix of instructional, research, and public service programs. Its two most important sources of funds are the state and federal governments; but state funding accounted for only 37 percent of its 1987 budget, exclusive of funding for its federally-supported energy laboratories; and substantial revenues accrue also from student fees, charges for various services such as medical care in its clinics and hospitals, and gifts and other contributions from private sources. But for the University of California and the California State University, state financing supports the core academic enterprise, and all faculty positions are funded on state money.

The State University depends far more heavily on state funding than the University. A much higher proportion of its budget stems from the state, which funds the core instructional program and all faculty positions of both institutions and which reimburses the State University through the general fund for student fee revenues. Federal funds for student aid are of particular importance to the State University, and private funds are becoming increasingly important. Although the State University has traditionally not relied on private sources of support to the same extent as the University, it raised $47 million from these sources in 1986-87 and has begun a concerted effort to identify its alumni and raise funds from them. Indeed, all institutions, including the community colleges, are turning increasingly to private funds to provide an element of quality or to support facilities or activities for which public support is inadequate.

Independent colleges and universities in California do not receive direct funding from the state because California's constitution prohibits such aid to private entities of all kinds. These institutions look to the state primarily for "portable" student financial aid that students bring with them when they choose to attend an independent institution, and they depend on private giving and tuition far more heavily than public institutions. Federal financial aid is an especially important factor to independent institutions, and the research-oriented institutions among them receive substantial federal research funding.

For fiscal 1986, ten California institutions were among the top 100 recipients nationally of federal funding, and three of them were independent institutions: Stanford, with $201 million; the University of Southern California, with $92 million; and the California Institute of Technology, with $64 million. The other seven were campuses of the University of California: Los Angeles, with $149 million; San Diego, $147 million; Berkeley, $126 million; San Francisco, $119 million; Davis, $54 million; Irvine, $42 million; and Santa Barbara, $37 million ("U.S. Funds for College and Universities," 1987, p. 22).

In 1985-86, Stanford led all U.S. higher education in private fund-raising, receiving some $179 million; and it seeks to raise $1.1 billion by 1992 in its current centennial fund drive. Other massive fund drives include those of the University of Southern California ($557 million); the University of California, Los Angeles ($300 million); the University of California, Berkeley ($320 million); and Occidental College ($100 million). As of 1985-86, seven of the top ten California colleges and universities in terms of private fund raising were independent institutions ("Privates Fearful of Huge Public College Fund Drives," 1987).

State Financing of the Public Four-Year Institutions

In California, the annual state budget carries appropriations for all state programs and agencies -- a notable difference from the federal government and many other states, where a number of appropriation bills allocate these funds. This fact, and California's constitutional requirement that its budget be balanced both as submitted by the Governor and as finally enacted, establishes a process that facilitates the setting of priorities, the review of state policy in the budgeting process, and programmatic trade-offs (Wellman, 1985). This massive spending bill must be submitted to the Legislature by the Governor in January of each year, and the Legislature must complete action through a two-thirds vote of each house by June 15 of the same year. The Governor may disallow or reduce individual items within the budget, and these actions may be reversed only by a two-thirds vote in each house.

Within the budget, General Funds (those funds that may be used for any purpose and are not dedicated to a specific program or activity) account for roughly 50 percent of all state spending. Higher education is highly dependent on these General Fund monies, whereas some other programs, such as highway construction and maintenance, are funded from sources reserved solely for those purposes. Moreover, higher education funding comes from the portion of the budget that is wholly at the discretion of the Legislature to appropriate. Other funding, such as for the public schools, is appropriated as an entitlement, and the level of funding is required by state law. Thus higher education must compete with other state programs -- particularly social programs -- for operating funds; and in times of sudden cutbacks in state spending, as after the passage of Proposition 13, it may often take disproportionate cuts because of this dependence on General Fund appropriations and the discretionary nature of higher education funding.

Steps in the Budget Process

The budget process for the University of California and the State University is relatively similar, particularly in its initial phases. Both segments begin preparing their budgets approximately a year before the Governor submits them to the Legislature. Thus at any one time, their budget offices are closing the books on the year concluded, dealing with problems arising in the current budget year, and consulting widely with campuses and various constituencies about elements of the budget for the upcoming year.

Both segments submit budgets based on their previous year's appropriation. In this initial phase, the two segments adjust spending levels for fixed costs such as price increases, and for workload increases.

- *Price Increases:* Price increases are generally assigned by the State Department of Finance based on an overall price index of commodities and services. Where unusually high levels of price increases have been experienced -- for example, the increased cost of utilities during the period of extremely high oil prices -- the Department may allow higher than average price increases.

- *Workload Increases:* The segments make a further adjustment to their baseline budget for workload increases based on enrollment increases measured in terms of full-time-equivalent students.

A later step in building the budget is the process of proposing new or expanded activities through "budget change proposals." These new initiatives, only part of which are usually included in the budget by the Governor, are usually the focus of particular debate as the segments' budgets progress through the legislative process.

The segments project their needed faculty salary increases on the basis of comparisons with groups of similar institutions approved for this purpose by the California Postsecondary Education Commission. They submit faculty salary data from those institutions to the Commission, which prepares an annual salary report that includes a calculation of the level of increase needed to produce parity with the average of the comparison group. These calculations are an important source of information to the executive and legislative branches as the possible salary increases are discussed.

Throughout the budget process, the State Department of Finance functions as the arm of the Governor. It carries out detailed negotiations with the segments after their governing boards receive their budget proposals, usually in September of each year. These negotiations embrace the various elements of adjustment to the baseline budget and justifications for the budget change proposals. The Department bases its final recommendations to the Governor on the adequacy of these justifications, the relative importance of the proposals when compared with various state priorities as set by the Governor, and their cost in relation to state income. The Governor makes the final decision on items to be included in the budget submitted to the Legislature.

During consideration of the segments' budget proposals by the Department of Finance, staff members of the California Postsecondary Education Commission review and analyze budget change proposals submitted to them by the Department, and in recent years they have attended the budget negotiations conducted by the Department with the segments. Then later, throughout the Legislature's consideration of the budget, Commission staff may testify at the request of staff or members of the budget committees, explain the Commission's position on proposals, and assist in negotiations over language to be included in the budget, such as that calling for studies of particular issues or evaluations of funded programs.

Elements of the Budget

The budget includes such elements as enrollment workload increases, instructional equipment replacement, instructional computing, organized research, public service, academic support-libraries, and institutional support. The following paragraphs illustrate examples of budget elements for the University of California. (Similar information on elements of the State University budget may be found in Wellman, 1985.)

Enrollment Workload Increases: According to this formula, in all fields except the health sciences one faculty position is justified for every added 17.6 full-time-equivalent students. For each new faculty position, approximately $80,000 is provided in state funding, broken down as follows: $35,174 for salary, $28,538 instructional support (academic administration at the departmental, college, and campus levels, and for departmental staff, equipment, and supplies), and $16,900 for faculty and staff benefits. One additional teaching assistant is justified for every added 44.45 full-time-equivalent undergraduate student.

Instructional Equipment Replacement: In accordance with depreciation schedules for state-funded instructional equipment, the University receives annual depreciation funding (estimated at about $31 million in 1987-88).

Instructional Computing: Based on a plan presented by the University to the state, and related to formulas, state funding for instructional computing needs in 1987-88 is about $21 million.

Organized Research: Formulas are not used for this category and budget requests are derived from emerging needs. Of the $170 million in state funding for 1987-88, about one-half goes for agricultural research. The other half provides for core support for Organized Research Units and supports special programs such as research into AIDS, biotechnology, toxic substances, and Pacific Rim initiatives. In addition to this state funding, over $600 million in federal and private research funding is available as a result of awards to individual faculty members.

Public Service: No formulas apply here. Individual justification is necessary for program budgets. Of the $52 million in 1987-88, approximately $41 million went to Cooperative Extension (a systemwide unit that brings the results of research to the agricultural industry throughout the state), about $4 million to affiliated medical programs, and nearly $7 million to intersegmental programs such as the California Writing Project, the California Mathematics Project, Community College Transfer Centers, and MESA (Mathematics, Engineering, Science Achievement).

Academic Support -- Libraries: This funding is guided by a library plan developed by the University and accepted by the state. It supports the library acquisition program, for example, based on a model that considers enrollment, degree programs, and sponsored research. The current acquisition level systemwide is over 600,000 volumes annually. Reference-circulation staffing is related to enrollment. Special funding provides for preservation of library materials, for data communication, and catalog automation.

Institutional Support: No formulas are applicable here. Approximately $200 million provides for general administration and services for the offices of the various chancellors, the Office of the President, and other administrative services, such as accounting, personnel, purchasing, and administrative computing.

Student Financial Aid: In 1985-86, about $283 million was available for this purpose, of which about $45 million was in state funding, about $74 million in federal funding, and the rest from private sources and fees.

In other areas such as auxiliary services (dormitories, food services, and parking), fees pay for the service. University Extension and Summer Sessions are self-supporting through student fees (as is also true at the State University). About 94 percent of support for the University's five teaching hospitals comes from patient revenue, while the remaining $57 million, called "Clinical Teaching Support," is related to enrollments, since it is used for educational purposes.

Altogether, in the 1987-88 State Budget, the University of California received $3.8 billion from all fund sources for its operating budget (an increase of 5.7 percent over 1986-87), plus an additional $140.3 million for capital projects. The California State University received $2.2 billion for current operations (an increase of 5.9 percent), plus over $106 million for capital projects (California Postsecondary Education Commission, September 1987, reproduced as Appendix B).

Financing of Independent Institutions

As noted earlier in this chapter, the primary sources of operating funds for California's independent colleges and universities are the tuition paid by students, gifts from donors, and income from endowment funds. Their state funding is limited to student financial aid and some funding by contracts or grants for specific research or services provided by the institutions.

The Education Commission of the States believes that independent institutions nationally are at a critical juncture in their history and that their relation to state government should be evaluated to see if it will be possible for the states to maintain their commitments to the public sector while "acting directly or indirectly to contribute to the continued vitality of the independent sector" (1987). In July 1987, the Education Commission of the States launched an 18-month project, co-chaired by Governor John D. Ashcroft of Missouri and former University of California President Clark Kerr, with the objectives of developing a factual base on the current status of these institutions, expanding awareness of how they contribute to public policy objectives, and recommending policy alternatives to guide the states as they seek to maintain or renew the vitality of the independent sector. In part, this project was prompted by concerns of likely enrollment declines until the early 1990s, the rising costs and resultant "tuition gap" between public and private colleges, the trend toward shifting a greater proportion of the substantial costs of attendance to students and parents, the diminishing role of the federal government, and increased reliance on institutional funds among independent institutions.

Many of these same concerns apply to independent colleges and universities in California. Although the California Postsecondary Education Commission found California's independent institutions to be in generally good condition in its last review of them (1985), it had some reasons for concern. While California's nationally-known independent institutions had done well in increasing income from private gifts and grants, other less well-known institutions had exhibited little progress or slipped backwards. Growing costs of attendance were a concern as were the signs that more frequently institutional funds were diverted from faculty salaries or libraries in order, for example, to provide financial aid. The Commission for the Review of the Master Plan noted that the tuition and fees of member institutions of the Association of Independent California Colleges and Universities increased on the average from $3,178 to $7,700, or 142 percent, between 1976-77 and 1985-86, not only outdistancing student fee rises in the public sector but outstripping increases in state and federal student aid, which rose only 52 percent for Cal Grants A (California's principal state grant program) and only 75 percent for Pell grants (the federal government's basic grants).

The example of Occidental College has been used recently to illustrate the dramatic increase in allocation of institutional resources to student financial aid. Twenty years ago, this selective liberal arts college in Los Angeles spent 9 percent of its budget for institutional aid; but in 1987-88, this aid will exceed 20 percent of Occidental's operating budget -- an amount in excess of its budgeted faculty salaries.

A further concern of some independent colleges and universities is the ever greater reliance of public and private institutions alike on private sources for gifts and donations. In view of such pressures, a number of the recommendations of the Commission for the Review of the Master Plan have special relevance for independent institutions. That Commission proposed a guarantee of financial aid to optimize student choice to all needy students, urged that the number of Cal Grant awards keep pace with enrollment, and advocated that the maximum award level be pegged to average per-student costs at the University of California and the California State University. Institutional leaders have applauded these proposals, and in a wider sense this strengthening of the state's student financial aid is of importance to all institutions, public as well as private.

Student Charges

Student fees increased dramatically in California's public universities at the beginning of the decade but have remained relatively flat since. For example, fees for the University of California undergraduate resident students jumped from $775 annually in 1980-81 to $1,300 in 1982-83, and 1987-88 fees are set at $1,492. The State University's fees jumped in the same period from $222 to $505, while its 1987-88 fees are set at $754. Total fees paid by out-of-state students (i.e., non-resident tuition in addition to the above resident fees) are set for 1987-88 at $5,782 at the University of California and $5,164 at the State University.

Until 1984, California's community colleges had been free, except for various discretionary fees charged by local districts. In January 1984, however, Governor Deukmejian signed a mandatory statewide community college fee into law that became effective in July of that year. It was expected to save the State General Fund nearly $75 million in 1984-85 by imposing a $50 per-semester fee for students enrolled for six or more semester units, and a $5 per unit fee for students enrolled for less than six units. At the same time, funds were voted to provide financial aid to needy students, and the law disallowed a number of fees that some local community college districts had previously charged students. Nonetheless, district variations in the administration of the financial aid funds and differing levels of student awareness of the availability of the aid led to considerable variation in the degree of access to the assistance; and those districts that had charged their students high optional fees lost substantial amounts of revenue.

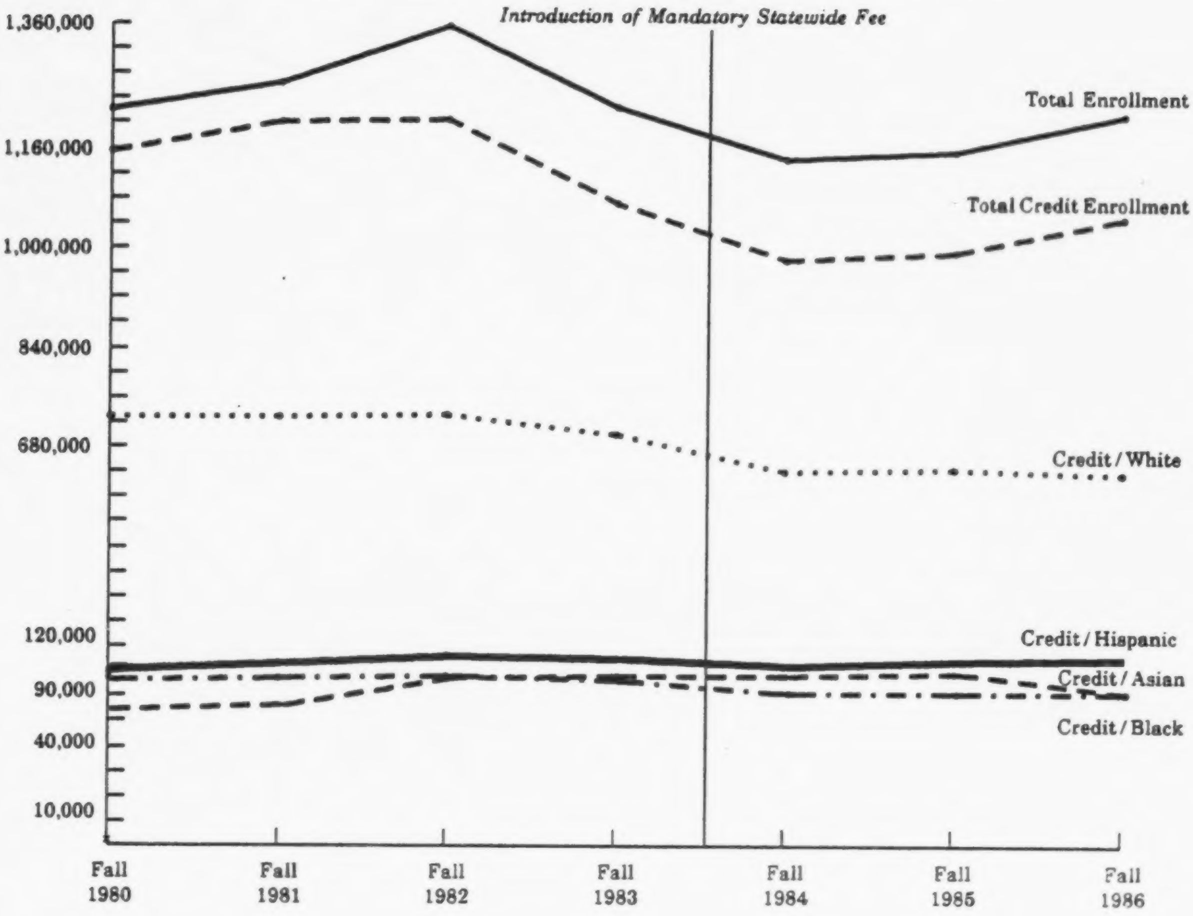
Disagreements over funding on the part of the Governor and the Legislature also led to considerable uncertainty on the part of students, which in turn affected their college-going plans. Yet studies into the impact of the fee suggest, as Display 11 on page 50 indicates, that the greatest loss of community college enrollment occurred prior to imposition of the fee rather than after, and that enrollment had stabilized by one year after the fee's introduction. As that display shows, over the three-year period from Fall 1982 to Fall 1985 nearly the entire enrollment loss from 1,205,585 to 991,658 occurred among students enrolled for credit, and the enrollment of Black students sagged more dramatically than that of any other group -- from 102,997 to 77,207 (California Postsecondary Education Commission, December 1986, p. 7).

As noted above, the tuition and fees of member institutions of the Association of Independent California Colleges and Universities increased on the average from $3,178 to $7,700, or 142 percent, between 1976-77 and 1985-86.

Financial Aid

Student financial aid in California from all sources amounted to nearly $1.5 billion in 1985 and assisted some 330,000 postsecondary students, according to the Commission for the Review of the Master Plan (August 1987, p. 48).

DISPLAY 11 California Community College Enrollments, Fall 1980 Through Fall 1986



Source: California Postsecondary Education Commission.

Of this total, only about $152 million was classified as state aid (that is, aid administered through the State Student Aid Commission), while $271 million was "institutional" aid awarded at the discretion of institutions but including some state funding for the public segments, $372 million was federal aid in the form of grants; and the largest proportion -- about $699 million -- was "other" aid, consisting mostly of Guaranteed Student Loans that were funded with money from private lending institutions but guaranteed by the federal government.

The Federal Role

The federal government has played a predominant role in providing aid nationally since World War II. Until then, its role was meager, but its so-called "G.I. Bill of Rights" that assisted returning servicemen to resume their education and productive careers launched a series of federal programs that became the principal source of aid to students throughout the country, with state and institutional programs supplementing this major contribution. Federal monies are now distributed primarily through Pell Grants, which were awarded on the basis of need to some 2,853,000 students in 1984-85 at an estimated average award of $1,105. That same year, Supplemental Educational Opportunity Grants averaging $550 went to 655,000 low-income students in order to bring expensive private higher education more nearly within their reach (Johnstone, 1986). Although such federal grants have been a vital source of aid for students and a major determinant of access nationwide, in recent years they have not been adequately adjusted for inflation, diminishing their relative value and causing huge growth in the Guaranteed Student Loan Program.

The Institutional Role

Aid awarded by institutions and usually funded from institutional sources is a second major component of assistance to California students. Generally, this aid is available in substantial amounts at independent institutions and the University of California -- accounting in 1984-85 to 38 percent of all aid at independent institutions and nearly 33 percent of all aid at the University. In contrast, corresponding percentages for the California State University and the community colleges were 7 and 10 percent, respectively (California Postsecondary Education Commission, June 1986, p. 21). Apparently California's independent colleges and universities have unfortunately had to finance all growth in institutional aid during recent years through increases in their tuition and fees. As a result, the California Postsecondary Education Commission has proposed that the state should consider ways of more explicitly helping the independent sector with institutional aid. Its staff has suggested that the State might well develop different financial aid models, including separate aid programs for the public and private sectors, create a better data system to aid institutional decision making and increase information about aid for students, offer loan forgiveness for prospective teachers, and rethink financial support for graduate students. This latter task is particularly important as the supply of college and university faculty decreases and as the need grows ever more acute to help minority students prepare for careers in college teaching.

The State Role

In California, the principal aid programs administered by the state's California Student Aid Commission are the "Cal Grant A" Program (formerly called the California State Scholarship Program) and the "Cal Grant B" Program (formerly called the California Opportunity Grant Program). Under these two programs, the state made nearly $110 million in awards in 1986, out of a total award for all Student Aid Commission programs of approximately $119 million. Five other programs round out that Commission's grant activities, including the Cal Grant C Program, which provided some $3 million for 2,300 awards to needy students in vocational training during 1984-85, and a modest Graduate Fellowship Program that made fewer than 900 awards in 1986-87, for a total amount of just under $3 million (Eureka Project, 1987, p. 28).

The Cal Grant A Program provides grants to academically accomplished students to assist with their tuition and fee expenses. As established, it was expected to further student choice and indirectly aid California's independent institutions. In its first year -- 1956-57 -- it made 640 awards. Succeeding years have seen strong and occasional explosive growth, as illustrated by these decennial figures:

Year	Recipients
1966-67	6,042
1976-77	39,100
1986-87	43,231

The Cal Grant B program was established to provide educational expense and some subsistence funds to educationally disadvantaged students, and it is explicitly targeted to students attending public institutions -- in particular, community colleges. Eligibility is based on measures of economic and educational disadvantage, with academic merit a lesser factor. The number of awards has grown consistently since the program was first funded in 1969-70:

Year	Recipients
1969-70	1,000
1979-80	20,077
1986-87	24,592

In the last decade, ethnic minority students have received a growing percentage of awards under these two Cal Grant programs. By 1985, 49 percent of Cal Grant A awards went to minority students, as did 87 percent of Cal Grant B awards. Yet over the three decades from 1956 to 1986, the percentage of Cal Grant A recipients attending independent institutions declined from 63 percent to 30 percent, even though 70 percent of Cal Grant A funds still go to such recipients because of their considerably higher tuition and fees. Another sign of erosion of that program's benefits for independent institutions is the decreasing percentage of tuition and fees at those institutions that maximum awards under the program now cover -- a low of 52 percent as of 1986 (op. cit., p. 34).

The Role of Loans

It is estimated that more than 3.3 million students nationwide borrowed about $9 billion in federally guaranteed loans for 1985-86 (Johnstone, 1986, p. 123). Concerns have been growing about the increased reliance of students on loans to finance their education, which has occurred because of failures to adjust fully the level of state and federal grants for inflation and to expand the number of grants to keep pace with growth in enrollment. For example, federal and California State grants made up 66 percent of California students' total financial aid need in 1979 but only 44 percent by 1986. Critics of the shift from grants to loans argue that it has moved the burden of paying for college from the parents of students to students themselves, while distorting their career choices and shifting enrollments from higher-cost independent institutions to lower-cost public colleges and universities.

In California, the Commission for the Review of the Master Plan recently recommended that (1) all needy students "who perform well" should receive adequate aid to attend an institution of their choice, (2) the number of awards should be adjusted to keep pace with enrollments, (3) the maximum number of awards be adjusted regularly to keep pace with changes in costs, (4) the state should maintain a balance between grants and loans as a matter of public policy to prevent over-reliance on loans, (5) student employment should be expanded to supplement grants and loans, and (6) loan recipients should be able to pay off their loans through a period of public service employment (July 1987, pp. 24-25).

Future Funding in California

While the underlying prospects for the funding base in California look promising, with most predictors suggesting that the broadly-based California economy is likely to continue to outperform the nation and that state revenues will remain strong, several questions require answers -- among them, its resources for meeting the capital construction needs of the segments, and the state's legal basis for controlling expenditures.

Capital Outlay

The first major question concerns capital outlay funding for higher education construction, renovation, and repair. The complexities of budgeting and approving such projects are complicated, but the need for more funds is clear. The three public segments have estimated their capital needs -- existing and projected for the dozen years through the year 2000 -- as amounting to $3.6 billion for the University of California, $3.3 for the State University, and $780 million for the community colleges (California Postsecondary Education Commission, October 1987). These sums vastly exceed state spending levels for capital purposes for the last dozen years. In effect, the state has over that period deferred many capital projects and transferred funding to general funding purposes.

In the past dozen years, seismic deficiencies -- of great interest to residents of an earthquake-prone state -- have grown more urgent. Much of the segments' vast plant is aging (especially that of the University of California), and they need to build for growth expected in the 1990s in areas where growth has been slow previously. Moreover, the physical plant requirements of some research areas with emerging technologies are extremely sophisticated, often with comprehensive health and safety needs. These facilities simply cost more than general instructional space.

Alternatives to these massive appropriations, such as the issuance of bonds, and greater use of educational technology, may reduce the ultimate bill and the drain on state general funding. Nevertheless, these estimated amounts represent a great deal of existing need and may even be understated in some areas. They must be borne in mind as state policy makers ponder academic access, excellence, and efficiency.

The "Gann Ceiling"

The second question centers around the "Gann ceiling" -- an overall expenditure limit on state spending approved by the voters in 1979, a year after the passage of Proposition 13. The initiative limits the level of tax-funded appropriations that can be made by the state or local governments in any year. The limit for a specific year is determined by adjusting the limit for the previous year by changes in the population, and by changes in the U.S. Consumer Price Index, or per capita income in California, whichever is less. Funds raised exceeding the limit are to be returned to taxpayers, unless voters authorize the state to retain them. State funds excluded from the calculation of this appropriation limit are those directed to local agencies, those for debt service, and those required because of judicial rulings or federal mandates. In short, revenues raised by the state through regular taxing channels but that accumulate in excess of the expenditure limits must be refunded to the taxpayers -- as they were in 1987 -- even if substantial unmet programmatic needs exist.

Only in the last two or three years has the Gann ceiling become a major issue. The initial calculations of the limit put it well above state expenditures, leaving plenty of room under the spending cap for growth in revenues. Yet as the need for public services increased and as the annual level of inflation slowed, the growth in program costs required to meet the state's needs outstripped the growth in the limit. For the first time, in connection with consideration of the 1987-88 budget, the state refunded in excess of $1 billion to the taxpayers.

The Legislative Analyst -- the state's advisor to the Legislature on fiscal and program policy -- believes that the Gann ceiling will be a significant restraint on California's ability to maintain essential state services in future years. Appropriation authority is likely to grow slower than the economy and the cost of government services. Population growth provided for in the provisions for adjusting the limit will not permit the maintenance of a constant level of services. Certain populations are growing significantly faster than the total population -- for example, the elderly, prison inmates, and school-age youth. The Analyst believes that the state is very near the point where the annual budget process will be a "zero-sum" game, with growth in one program coming at the expense of another.

The Commission for the Review of the Master Plan held that the state's expectations for postsecondary education institutions must be matched by its willingness to support the costs of these institutions: "We believe that the citizens of this state will continue to be committed to supporting a postsecondary education system that is unified, equitable, of the highest quality, and efficiently operated" (July 1987, p. 47). In the Commission's view, a significant obstacle to supporting such a system is the Gann ceiling, which renders the maintenance of current levels of services difficult and the introduction of reforms dubious.

A number of efforts have been announced to qualify initiatives for the ballot to seek voter approval for modifications to the Gann ceiling. While it is premature to analyze any of these proposals, it does appear that a common feature is concentration on the mechanisms for adjusting the limit through a variety of proposed modifications. These modifications would permit in a variety of ways more realistic adjustment to the limit so that authorized expenditures and needs would more nearly be in balance. Approaches suggested include modifications explicitly recognizing population in fast-growing program areas such as the public schools, elimination from the limit of some program areas such as highways, and changes to the adjustment mechanisms.

No consideration has greater implication for the financing of California education than resolving this constraint of state policy over appropriation levels. A very wide range of programs in the schools and in postsecondary education are directed to raising preparation levels generally and to retaining underrepresented minority and low-income students in the educational system and recruiting them into successful postsecondary experiences. These programs are of profound importance to the state in social and economic terms, but they are costly and require stable state financing over a period of years for success.

Four Coordination of Higher Education

COORDINATION is a pervasive and decentralized function in a system of colleges and universities as large and diverse as California's. The state has no overarching department of education to provide highly centralized direction to the higher educational enterprise. Instead, many areas of academic decision making require reconciliation of competing demands and interests through consultation, negotiation, and accommodation that may involve state and segmental officials, campus administrators, faculty members, students, and even in some instances alumni. Within individual institutions, coordination of decision making occurs at the departmental and divisional levels, at the level of the academic senate and its multiplicity of committees, and of course at the level of the campus chancellor or president. Between individual campuses and the segmental central office, similar levels of coordination exist, as they do among segments and with state agencies.

For instance, officials of California's public colleges and universities submit proposals for new degree programs to their segmental office after substantial review at the departmental and campus level. In the segmental office, these proposals are subjected to extensive review -- a process that may produce outright rejection or, more likely, modifications that result in their general acceptance. Then the proposals must be reviewed by the California Postsecondary Education Commission -- a process that may again result in considerable discussion and amplification of their purposes. Only after the Commission completes its review and approves the proposals do they receive final segmental approval. This approval, however, may be just the beginning of another process of consultation and justification if implementing the proposals requires new funds and thus institutional and state budget action.

As this example illustrates, consultation and coordination are essential dynamic processes in holding California's system of higher education together while enabling it to move forward with flexibility and innovation, despite the inertia that accumulates in any system over time. In this regard, the state's recent Commission for the Review of the Master Plan recognized that a central task for the California Community Colleges is to put in place a flexible and responsive consultative process as a basis for their effective statewide governance.

Because of the importance of coordination in California higher education, this chapter reviews the development of coordinating agencies nationally and in California and then examines the coordinating roles of two California agencies -- the California Postsecondary Education Commission and the California Education Round Table.

Coordination of Higher Education in the United States

Since California adopted its Master Plan for Higher Education in 1960, state coordination of colleges and universities has become institutionalized on the American scene. State coordinating agencies first developed in the late 1920s and early '30s as a response to the dire resource problems faced by the states as a consequence of the Great Depression. The number of such agencies continued to grow in the immediate post-World War II era, as states reacted to the rising expectations for higher educational opportunities set in motion among returning veterans of the War by the passage of the G.I. Bill of Rights -- a massive educational assistance program for returning servicemen. More recently, the factor that quickened interest in coordination and planning was the expectation in the 1960s of large enrollment increases that would strain the resources of every state and threaten the levels of educational quality they hoped to maintain or attain.

In the United States today, statewide coordinating agencies are usually classified into two broad categories: (1) the single *governing* board for all public institutions in the state, and (2) the *coordinating* board that works with the governing boards of the segments or individual institutions in either a regulatory or advisory capacity. Both forms have enjoyed considerable growth in number since 1960, with the greatest tendency toward regulatory boards. Single statewide governing boards numbered only 14 in 1960 but by 1985 had grown to 22, while statewide coordinating boards, both regulatory and advisory, had grown from 10 to 27. Of the 27, 20 are regulatory and only seven (including California's) are advisory.

During the last 25 years or so, states have also moved toward a majority of members on the boards representing the general public and toward prohibiting educators and other employees of higher educational institutions from membership, as in California. Over the quarter century, most regulatory and advisory coordinating boards have resisted taking on the administrative functions required of governing boards, and they have tended to work primarily with the problems of higher education as traditionally defined rather than with all issues of education beyond the high school, including those involving private proprietary (for profit) schools and public adult schools.

According to a 1985 study by Lyman Glenny, states with single statewide governing boards tend to fall below the median in per capita income and number of institutions, and in general seem to have stronger legislative than gubernatorial influence in their political process. Regulatory coordinating boards are most often found in large states with above average income, with complex and diverse systems of higher education, and with a tradition of strong governor leadership.

Nonetheless, the division of coordinating agencies into the broad categories of governing board and coordinating board tends to obscure what is in fact a continuum of authority extending from the consolidated governing board at the most powerful extreme through various forms of coordinating boards to advisory planning agencies at the other extreme, as illustrated in Display 12 below. Moreover, these two categories, while reasonably clear, may not in many cases denote significant differences among agencies if their role is judged not by their assigned authority but rather by their ability to influ-

Display 12 Governing, Coordinating, or Planning Authority of State Boards of Higher Education, 1986

Consolidated Governing Board		Coordinating Board						Planning Agency
		With program approval authority			With program review and recommendation authority only			
Board for all public institutions	Board for all senior institutions; separate agency for community colleges	Consolidated or aggregated budget	Budget review and recommendation	No statutory budget role	Consolidated or aggregated budget	Budget review and recommendation	No Statutory budget role or program approval	
Alaska	Arizona	Alabama	Colorado	New York[1]	Arkansas	Alaska[2]	New Hampshire	Delaware
Georgia	Florida	Connecticut	Indiana		Florida[1,2]	California		Nebraska
Hawaii	Iowa	Illinois	Kentucky			Michigan[1]		Vermont
Idaho[1]	Kansas	Maryland	Louisiana			Minnesota		
Maine[3]	Mississippi	New Jersey	Missouri			Oregon[2]		
Massachusetts	New Hampshire[2]	Ohio	New Mexico					
Montana[1]	North Carolina	Oklahoma	Pennsylvania[1]					
Nevada	Oregon	South Carolina	Tennessee					
North Dakota	Wyoming		Texas					
Rhode Island			Virginia					
South Dakota			Washington					
Utah								
West Virginia								
Wisconsin								

1. State with agency responsible for all levels of education.
2. State with separate statutory coordinating agency.
3. Maine Maritime Academy and Vocational-Technical Institutes are under other boards.

Source: Education Commission of the States, 1985.

ence legislation or policies of institutions. The assigned powers and functions of an agency are obviously an important ingredient in determining an agency's ability to get things done, but most observers of these agencies would agree that their ultimate power is the result of the leadership they display on important issues and the quality of their staff work. As the California Legislature's Joint Committee on the Master Plan observed in 1973, whatever the powers of an agency, it must enjoy the confidence of the legislative and executive branches of government as well as that of the segments and the institutions.

Coordination in California Under the Postsecondary Commission

Antecedents of the California Postsecondary Education Commission

As Chapter Two indicated, the history of coordination in California prior to 1960 was one of voluntary coordination between the two governing boards for higher education -- the Regents of the University of California and the State Board of Education, which governed the state colleges and oversaw the junior colleges. But with the Master Plan, California joined the nationwide movement towards statutory coordination by creating its first coordinating agency -- the Coordinating Council for Higher Education.

The Coordinating Council functioned with various levels of success for a decade, but when the Legislature's Joint Committee on the Master Plan finished its lengthy review of the Master Plan in late 1973, it concluded that although the structure and governance of California's multi-segmental system was in general adequate, its principal deficiencies -- insufficient coordination and planning -- could be traced to various problems of the Council. "Coordination is the critical element in a multisystem organization of postsecondary education," it declared. "California needs an independent agency capable of articulating statewide needs and providing advice to the segments and elected public policy makers" (1973, p. 19).

The Joint Committee had developed a long list of objections to the Council, as noted in Chapter Two -- ranging from the dominance of the Governor, who appointed all its public members, to the influence of the segments, which were usually represented by their chief executive officers. While rejecting the notion of a superboard -- a board above the existing governing boards -- the Committee recommended abolition of the Council and the creation of a new agency with (1) a majority of public representatives appointed by the Legislature and the Governor, (2) a broader scope to include all postsecondary education, (3) semi-governing powers in such areas as approving all changes in admission policy of public institutions, administering some programs, and collecting comparable data from the segments, and (4) a mandate for an active role in continuous planning that took into account the state's projected educational needs as well as its present institutional resources. It also recommended constitutional status for the new agency -- the California Postsecondary Education Commission.

The Legislature rejected the Joint Committee's proposal for giving the new Commission constitutional status, and it retained the essentially advisory role of the Coordinating Council, but it agreed with the Joint Committee about the Commission's basic structure and function. It established planning as the Commission's prime responsibility and directed it to provide advice on segmental budgets, review and comment on proposed programs, act as a clearinghouse for data, advise on the need for and location of new public institutions and campuses, review all proposals to change eligibility requirements, and pursue a variety of other activities. It also designated the Commission as California's federal "1202 Commission" to administer certain federal programs and receive federal planning funds. (Appendix C reproduces the enabling legislation that created the Commission.)

Organization of the Commission

As noted on page 21 in Chapter One, the Commission consists of 15 members, nine of whom represent the general public and the other six represent the six major segments of California education (the California State University, the University of California, the California Community Colleges, the independent colleges and universities, the State Board of Education, and the private postsecondary educational institutions). The day-to-day work of the Commission is carried out by its staff located in Sacramento and headed by its executive director, an appointee of the Commission. Other members of the staff are appointed by the executive director. At present, the Commission has 53 staff positions, of which 24 are professional (executive, administrative, research, and liaison), 12 are technical (support services including computer and library services), and 17 are secretarial-clerical. Its liaison staff deal on a daily basis with legislative and executive staff and officials and media representatives. Its research staff prepare the reports approved and published by the Commission, of which some 40 to 50 are published annually, and carry on various continuing activities such as the Commission's extensive review of proposed programs.

Display 13 on the next page sets forth the Commission's budget for the three most recent budget years. Personal services includes staff salaries and benefits. Operating expenses include such categories as general expenses, travel, printing, facilities operations, and funds for computer time.

DISPLAY 13 Budget of the California Postsecondary Education Commission by Object, Fiscal Years 1985-86 Through 1987-88 (Dollars In Thousands)

Object	Budget Act 1985-86	Budget Act 1986-87	Governor's Budget 1987-88
Personal Services	$2,381	$2,558	$2,622
Operating Expenses and Equipment	$1,015	$1,649 [a]	$1,139 [a]
Total Expenditures	$3,396	$4,207	$3,761
Reimbursements	-131	-210	-373
Special Adjustment	--	--	-36
Adjusted Total Expenditures	$3,265	$3,997 [a]	$3,352 [a]

[a] Appropriations for special studies account for these year-to-year differences.

Source: *Governor's Budget, 1987-1988*, pp. E 62 and E 63.

Role of the Commission

Since the Commission's creation in 1974, its role has evolved slowly, with the relative importance of assigned functions varying from time to time as conditions have changed within the state. It has had little choice but to change priorities as federal funding for various programs has declined (for example, federal funding is no longer available for planning by 1202 Commissions), and as it moved to deal with the post-Proposition 13 environment in California. Throughout this turbulent period, however, the Commission has established a credible voice as an independent authority. It has been sympathetic to the purposes of higher education, of course, but at the same time it has functioned as a constructive critic of policies and priorities, in which role it has rendered valuable advice to decision makers in Sacramento.

Four closely related functions or services are the prime avenues through which the Commission discharges its responsibilities: (1) coordinating activities among the segments, (2) evaluating state-funded programs, (3) planning, and (4) acting as an information clearinghouse. In dealing with individual issues, the Commission may act in several or all of these functional roles. Ultimately, all of its activities are directed toward advising the Governor, the Legislature, and the segments about future policy and practice. The most tangible form of this advice is to be found in its formal recommendations from the many studies it undertakes, but the Commission provides advice in a variety of ways, and many of its most widely used reports do not contain recommendations. For example, its executive director and staff testify before to legislative committees, speak in other forums on budget and program priorities, interact with college and university officials in advisory committees, and through relations with the media, bring its views to a wide audience throughout California.

Among its coordinating activities, the Commission has led numerous efforts that have ranged from facilitating the acceptance of a mutually agreeable policy for adjusting student fees (described in some detail below) to developing a plan for transfer centers in the community colleges. As an evaluator, the Commission reviews programs and activities across the range of postsecondary education, from equal educational opportunity programs for students in public institutions to proposals for the humane care of laboratory animals at the University of California. As a planning agency, it identifies unmet needs and future demands for postsecondary education and suggests priorities and ways of coping with them -- in recent years more through special reports on particular issues rather than through annual or five-year master planning updates. In its role of information clearinghouse, it has established and maintained a consistent, comprehensive, and widely accepted data base for all California higher education that now encompasses postsecondary enrollments, degrees conferred, and personnel characteristics, among other areas of information, and that is an indispensable resource for postsecondary coordination, planning, and evaluation.

Examples of Commission Activities

Three Commission projects illustrate its several roles -- (1) its coordination of a fee policy for public colleges and universities in the state, (2) its program review efforts, and (3) its long-range planning activities.

Development of California's Fee Policy: The development of a fee policy for California public higher education during the early 1980s is an excellent illustration of the Commission's ability to identify and raise significant issues to the level of policy discussion, and after suggesting possible solutions and priorities, to facilitate the delineation of an approach acceptable to the interests involved. In a number of studies reviewing the escalation of fees charged to students in the University of California and the California State University (notably in 1982 and 1983), by 1984 the Commission had laid the policy analysis foundation for a full-fledged discussion of the need for a state policy governing fees. Student groups and many legislators thought the scale of those fee increases suggested the need for guidance to the segmental governing boards that only an overarching state policy could provide. The results of these studies were brought to the attention of the Legislature and the Governor by the Commission in its capacity as budget advisor. At a time when the problem was being acknowledged by all concerned, the Commission was in a unique position through its extensive consultative network -- including its various advisory committees, the Statutory Advisory Committee (comprised of senior staff of the segments), the Student Advisory Committee, and in its daily interaction with individual legislators and legislative committees -- to define the dimensions of the problem and to provide its good offices to lead a collective effort to reach a solution.

As a consequence of these efforts and those of student groups to bring the situation to the attention of the public generally, in July 1984 the Legislature directed the Commission to convene a committee to advise on the necessary elements of a long-term student fee policy, which, the Legislature declared, it intended to adopt. The director of the Commission chaired this fee policy committee, thus signaling the importance of the issue to the segments, who in turn appointed senior administrators to serve on it. The committee's membership was extremely diverse and included administrators and students from the University of California, the California State University, and Hastings College of the Law (a public institution loosely affiliated with the University), staff representative of the policy and budget committees of the two houses of the Legislature, and representatives of the State Department of Finance and the Governor's Office. Because of the intense interest in the issues, some 34 persons participated at one point or another in the committee's meetings.

Work proceeded on the fee policy over a four-month period. Early in the process, the committee agreed on the principles that should underpin the policy. Fundamental to the work of the group was the collective decision that an explicit state policy should replace the existing implicit policy, which had essentially left up to the governing boards the setting of the annual fees charged students. It became clear that the committee believed the rapid fee increases made in response to the state's fiscal crisis of 1981-82 required the state to assume the responsibility to provide a stable environment for segmental planning. The committee also considered as desirable separating to the greatest extent possible the use and level of student charges from the state's annual budget review process.

The first accomplishment of the committee was its endorsement of a set of principles that should be embraced by the new policy and that may be summarized as follows:

- Students should pay some portion of the cost of their education, but the state should bear the primary cost.
- Decreases in mandatory, statewide fees should be gradual, modest, predictable, and equitable among students in each of the segments.

- Undergraduate and post-baccalaureate students should pay the same fees.
- Expenditures of revenues from fees should be in accord with segmental policies, but should not be used to offset costs related to instruction.
- Methodology to determine the fee levels should index to a three-year moving average of changes in state support per full-time equivalent.
- Increases in any event should not exceed 10 percent of the fee for the prior year.
- In the event of unusual state fiscal circumstances (e.g., substantial imbalance of state revenues and expenditures), fees could be increased up to 10 percent in one year.

The Commission hired a consultant to interview interested parties and prepare a draft paper on the elements of the new policy, while Commission staff prepared a paper setting forth ten alternative fee methodologies and comparing their results, had they been in effect over the previous decade, to actual fees in each of the segments over that same period. In the course of several meetings between October and December 1984, the committee examined and discarded various alternatives and refined the policy elements until the policy could be endorsed by consensus of the representatives. In December, the Commission published and distributed the committee's report, *Principles for Long-Term Student Fee Policy* (Fee Policy Committee, 1984).

It is difficult to imagine another organization as ideally situated to perform the sensitive task of bringing the segments, the students, and state agencies and policy makers together on this issue. No other agency had explored the relevant policy issues from an intersegmental perspective. Because of the prior work conducted by the Commission staff, the Commission was able to combine an objective point of view with an authoritative research record. The principles articulated by the committee were enacted into state law in Senate Bill 195 (1984), and the Regents of the University and the Trustees of the State University acted to implement their portions of the policy. The provisions of this policy were responsible in large measure for the compromise between the segments and the Governor in early 1987 that reduced the level of the mid-year cut to segmental budgets and relieved pressures on them to increase student charges without the ten-month notification period required by the policy.

Program Review: An important activity carried on by the Commission since its earliest days is its role in the review of proposed new programs and its somewhat less defined activities in connection with the review of existing programs. A program, as defined by the Commission, is a "series of courses arranged in a sequence leading to a degree or a certificate." The central offices of the public segments submit proposals for new programs in a mutually agreed upon form that includes a description of the program, its relationship to other campus programs, the resources needed to implement it, its relationship to similar programs in other institutions, and information relating to need and demand. The Commission staff responds within 60 days of receipt of the proposal and may comment favorably, unfavorably, or raise a number of questions. An exchange between the respective staffs then ensues, and differences are then frequently resolved by the receipt of additional, clarifying information, or modifications in the proposal. If a segment disagrees with the final recommendation of the Commission staff, it may appeal to the Commission. The Commission then reports annually to the Legislature on these program review actions.

In addition to the program proposals, each segment provides Commission staff with quarterly reports of program developments such as changes in the names of programs, final approval of programs by the governing board, and an annual update of a five-year projection of proposed programs reflecting current campus thinking on the subject. This report is used by the Commission staff to screen projected programs and reduce the number of individual programs subject to detailed review. In effect, a program that has appeared in the five-year projection for at least two years and has not been the subject of questions raised by Commission staff is not subject to detailed review.

Display 14 on the next page shows by segment the number of proposals received by the Commission staff annually since it started its program review activities in 1976-77. The steady decline in the number of proposals appears to reflect budgetary constraints, particularly in the community colleges, the maturing of many campuses in the segments, the increasing efficiency of segmental review processes, and the staff's judicious screening of projected programs.

Long-Range Planning: The legislation creating the Commission assigned it a substantial planning role, including preparation of a five-year plan and annual updates of that plan. One of the Commission's first projects was thus the publication of a five-year plan for the years 1976-81. It updated the plan in 1977 and 1978 and issued a second five-year plan in 1981, but while it has continued its commitment to planning as a central focus of its activities, since 1981 it has done so through extensive studies of specific issues -- such as student charges, student financial aid, and access -- rather than through separate planning documents. During this period, the Commission's role in budget review has expanded, and specific legislative requests for studies have mounted impressively, allowing the Commission to direct planning initiatives on a number of fronts. (For a discussion of this history, see pp. 29-31 of the Commission's *Background Papers to a Prospectus for California Postsecondary Education*, March 1985.)

DISPLAY 14 Number of Proposals for New Programs Received by the California Postsecondary Education Commission from Each Public Segment Since 1976-77

Year	University of California	The California State University	California Community Colleges	Total
1976-77	17	29	93	139
1977-78	15	20	101	136
1978-79	13	17	55	85
1979-80	12	16	43	71
1980-81	9	17	51	77
1981-82	5	11	43	62
1982-83	8	27	32	65
1983-84	6	23	16	45
1984-85	4	22	25	51
1985-86	7	9	27	43

Source: California Postsecondary Education Commission, June 1987a, p. 1.

A new initiative for the Commission in the area of long-range planning has been suggested by its staff, following a recommendation by the recent Commission for the Review of the Master Plan that the Postsecondary Education Commission coordinate state-level long-range planning in cooperation with the segments and:

- develop a common definition of long-range planning;
- prepare a common set of assumptions on which such planning should be based;
- review the planning of the segments to assure that these efforts are based on the common set of assumptions; and
- prepare annually detailed 20-year projections of postsecondary education enrollments in the public and private sectors at all levels of instruction.

This recommendation of the Commission for the Review of the Master Plan assumed that all segments would continue to develop their own long-range plans for programs and facilities but in doing so should use common enrollment estimates and assumptions to permit the Postsecondary Education Commission to relate their plans to the overall needs of the state.

In suggesting a revitalized long-range planning role for the Postsecondary Education Commission, its staff noted that at least three factors suggest the need to develop this capacity.

- The growing population characterized by different growth rates among different age and ethnic groups and different regions of the state.
- Pressure to build new postsecondary educational facilities, juxtaposed with a need to maximize efficient use of resources by accommodating enrollment growth in the private sector.
- The likely implementation of a comprehensive longitudinal student data base that should provide researchers with empirical information about educational and other factors that influence success and failure. As more becomes known about these factors they should be included in long-range demographic projections to highlight the educational policy issues.

As the staff noted, such a process should be issue-oriented and would not be intended to guide specific operational decisions. Several elements crucial to the Commission's capacity to assert a leadership role will include:

- An enrollment planning capacity built upon existing work done by the segments and the State Department of Finance -- the department responsible for enrollment projections.
- Development of a statewide plan for accommodating educational demand -- a plan that would take into account institutional capacities in public and private postsecondary education.
- Analysis of enrollment demand and establishment of a modeling capacity based on differing assumptions about population growth and characteristics.
- Faculty flow and renewal planning -- one of the most important planning and management challenges facing California, since the next decade will see major changes in the makeup of institutional faculties and present the state with opportunities to assist affirmative action and contemplate new policies in the faculty area.

The staff has suggested that the first step should be to evaluate and clarify the Commission's role in long-range planning. As part of this review, the Commission's past and present planning efforts should be evaluated carefully to determine their relevance to the Commission's needs. A technical committee of segmental representatives and experts from other state departments will assist the Commission staff in this initial phase, and the Commission's Statutory Advisory Committee will serve as the policy advisory committee for the effort. At the conclusion of this exploratory stage in March

1988, the Commission will be asked to take action in defining its long-range planning role for the future.

Current Priorities of the Commission

In the Commission's 1987-88 workplan, the staff has proposed 46 activities grouped under the following six broad categories or themes that reflect the Commission's current areas of concern and interest:

- Long-range planning to meet California's educational needs;
- Linking educational institutions more effectively;
- Ensuring equal educational opportunity in postsecondary education;
- Incentive funding, assessment, and outcome measures: the state's role;
- Financing postsecondary education; and
- Developing effective statewide programs.

While the 46 projects listed in the workplan do not represent the totality of the Commission's planned undertakings for 1987-88, they will account for nearly all of its reports to be produced in the next year to 18 months. Many other activities are ongoing, such as liaison with other state agencies, monitoring the activities of the governing boards of the segments, providing liaison with the Legislature, the Governor's office, and the Sacramento-based staffs of the segments, and participating in visits to unaccredited institutions that are approved or authorized by the State Department of Education to grant degrees. These activities are essential to the effective functioning of the Commission because they solidify ties with educational and political leaders and convey most effectively the Commission's advice and recommendations.

Of the 46 items in the Commission workplan, only six are clearly identifiable as its own initiatives. One other was suggested by its Statutory Advisory Committee and endorsed by the Commission staff. Of the remainder, 25 are necessary to satisfy statutory requirements; 11 are called for in budget language; and one is required by federal law. This distribution is fairly typical of recent work required of the Commission and illustrates how the number of annual initiatives the Commission can launch is limited by resources and the very large number of legislative requests.

Intersegmental Coordination Through the California Education Round Table

In May 1980, David Saxon, then president of the University of California, invited his colleagues in the other segments to join him in forming a "California Round Table on Educational Opportunity" dedicated to improving the quality of education at all levels. He viewed the Round Table as a "volunteer public interest coalition" whose members would include the chief executive officers of California's three public segments of higher education, the State Superintendent of Public Instruction, the chair of the Association of Independent California Colleges and Universities, and the executive director of the Postsecondary Education Commission.

In March 1981, the members of the Round Table issued a "Statement of Purpose and Initial Agenda" in which they listed as its goals (1) increasing the percentage of students who graduate from high school; (2) improving the academic skills of high school graduates; (3) strengthening the teaching profession; (4) improving the coordination and effectiveness of postsecondary outreach programs; and (5) strengthening the community college transfer function. As it evolved, the Round Table focused particularly on "affirmative action" activities in order to increase the participation by underrepresented minority students in higher education.

Because the Round Table's agenda concentrated on issues of minority access, it possessed an urgency that provided its own momentum. Projects focused on areas in which the segments could collaborate, such as teacher preparation and distribution of a booklet to 300,000 eighth graders to motivate them to begin planning for college. Perhaps most important was its support of intersegmental faculty collaboration, particularly efforts to design statements about levels of competency required of graduating high school students in a range of disciplines. These were intended to have a far-reaching impact on the design of public school curricula and on instruments to measure student progress in the curriculum.

Thus, the Round Table proved very effective as a forum for exchanging views among the leaders of California postsecondary education and in facilitating selected intersegmental projects. The number of projects, as well as the scale of segmental involvement and financial support, increased dramatically in the intervening years. The focus generally remained on increasing access for underrepresented minorities, with many of the programs occurring in public school setting.

New Directions for the Round Table

In 1986, the Round Table began exploring new directions and emphases. To reflect a broader concern with issues relating to educational policy, it changed its name to the "California Education Round Table." In the context of the 1985-88 review of the Master Plan, this redefinition of its goals and structure seemed especially appropriate. Intersegmental cooperation had taken on increased importance in the state, due in part to increased interest in programs that cut across segmental lines. The new emphasis related as well to a perceived state need for cooperation that had emerged in legislative budget hearings as well as during the review process by the Commission for the Review of the Master Plan. It is illustrated by the number of intersegmental programs aimed at increasing educational equity and that are listed in Display 15 on the next page along with segmental programs. Given its record and interest in exploring new assignments, the Round Table was recognized by that Commission as a logical choice to take on additional coordination tasks. In the Commission's view, the need to provide administrative coordination of intersegmental programs represented a critical area that was not adequately managed by the state. Identifying this area as the "missing link" in the state's coordination apparatus, the Commission noted that policy and evaluation linkage were provided by the Governor, Legislature, and the Postsecondary Education Commission (CPEC), respectively, but it observed (July 1987, p. 7):

> What is missing is the operational linkage. CPEC cannot provide this linkage as long as its primary function is to advise the Governor and the Legislature as to the functioning of the segments. To do so effectively, it must evaluate institutions and programs objectively, something it could not do with respect to programs it administers.

The solution recommended gave the Commission's imprimatur to the expanded program of activities then being planned by the Round Table. In particular, the Round Table had called together a variety of concerned faculty and staff to create under its aegis a new entity -- the Intersegmental Coordinating Council (ICC) -- that would be responsible for coordinating intersegmental programs. The Intersegmental Coordinating Council began life in July 1987. In describing the Council's responsibilities, the Round Table clarified its own role:

> The Round Table is the principal entity under which intersegmental programs and activities are fostered, promoted, and coordinated. The ICC is advisory to the Round Table, which has the responsibility for assessing and evaluating the effectiveness of the Council and programs coordinated by it. The Round Table sets the agenda for addressing the intersegmental issues, determines priorities and identifies necessary

DISPLAY 15 Equity Program Funding, 1986-87

Program Name	State General Fund	Student Fees	Total Funds
Preparatory Efforts			
Intersegmental:			
California Academic Partnership	$ 1,500,000		$ 1,500,000
MESA	1,803,000		1,803,000[a]
Segmental:			
Academic Enrichment, UC	200,000		200,000
College Admissions Test Preparation Pilot Project, State Department of Education	300,000		300,000
College Readiness Program, CSU	480,000		480,000
Demonstration Programs in Reading and Mathematics, State Department	4,367,000		4,367,000
Early Outreach, UC	2,685,750	$ 895,250	3,581,000
Retention of New Teachers in Inner City Schools, State Department of Education	400,000		400,000
Admissions Outreach Efforts			
Intersegmental:			
Transfer Center Pilot Program	3,373,000		3,373,000
Cal-SOAP	497,000		497,000[b]
Segmental:			
Immediate Outreach, UC	49,750	183,250	733,000
Core Student Affirmative Action, CSU	3,256,000		3,256,000
Retention Efforts			
Segmental:			
Intensive Learning Experience, CSU	2,737,000		2,737,000
Student Affirmative Action Support Services, UC	1,751,250	583,750	2,335,000
Summer Bridge, CSU	3,080,000		3,080,000
Discipline-Based Efforts			
Intersegmental:			
Minority Engineering Program	[c]		[c]
Segmental:			
Financial Aid Information Management System, CSU	68,420		68,420
Faculty Mentoring Pilot Program. CSU	500,000		500,000
Comprehensive Services			
Educational Opportunity Program,UC	4,201,000		4,201,000[d]
Educational Opportunity Program,CSU	11,723,225		11,723,225[d]
Extended Opportunity Programs and Services,CCC	19,119,000		19,119,000[d]
Totals	$58,390,395	$5,863,250	$64,253,645

a. Corporate gifts are not included in these totals.

b. Institutional matching funds are not included in these totals.

c. Minority Engineering Program funding is included as part of the MESA allocation.

d. Financial assistance grants for students are not included.

Source: California Postsecondary Education Commission.

> resources. In doing so, it takes into consideration recommendations of the ICC regarding agenda issues and priorities. It is the responsibility of the Round Table, at least on an annual basis, to review the status of intersegmental relations and respond to major recommendations of the ICC regarding programs and activities to strengthen these relations.

The Intersegmental Coordinating Council is responsible for ensuring that the Round Table's mandate for more effective intersegmental relations is carried out and for seeing that intersegmental problems are resolved in a timely manner. The Council is the primary agency for facilitating, monitoring, and evaluating cooperation and collaboration between and among secondary and postsecondary segments. It serves as an administrative, coordinating, and recommending body, identifying problems that need to be addressed, receiving issues raised by outside sources, assigning unresolved matters to existing bodies for resolution, or forming *ad hoc* groups if there is no existing body to handle a particular need.

Comprised primarily of faculty leaders, students and policy-level staff from the segments, the Council sees one of its most important responsibilities as deciding which issues should be addressed intersegmentally. To be considered intersegmental and subject to coordination by the Council, an activity or program must (1) involve at least two segments, (2) be statewide in scope or involve a large region, and (3) be characterized by true sharing of responsibility. Once identified, information and coordination of these programs is facilitated through a series of "cluster committees." These clusters are groupings of intersegmental activities and programs having a common subject area or category of educational function. To begin with, the Round Table identified four major clusters of these topics, as follows:

1. *Transfer and Articulation:* The attention of this cluster is on improving the transfer function, with emphasis on the articulation of transfer credit earned in California community colleges. The dominant interest of the group is course articulation, but reduction of artificial barriers to transfer is another important concern.

2. *Curriculum and Assessment:* The focus of this cluster is on articulation issues related to curriculum, the measurement of education achievement, and the interface of public school and postsecondary curriculum and assessment. Also resting with this cluster is responsibility for addressing difficult intersegmental issues such as articulating programs of English as a second language.

3. *Outreach and Student Preparation:* These programs and activities deal primarily with informational outreach and assistance in preparing stu-

dents in the public school and community college segments for college-level or upper-division studies.

4. *Improvement of Teaching:* This cluster is concerned with the improvement of instruction at all levels, with particular emphasis on revitalization of preparation for school teachers.

In the course of the academic year 1987-88, the four clusters will be implemented; members will be nominated; charges will be drafted; and cluster committees will meet with representatives of intersegmental programs to determine their needs and effectiveness. The primary tasks assigned to each cluster in this first year included inventorying existing activities and recommending actions to address problems or neglected areas.

Coordination of the Round Table with the Postsecondary Education Commission

As an emerging enterprise, this new Round Table activity introduces -- for some -- an element of uncertainty into California's coordination picture. Several observers have argued that the functions claimed by the Round Table would more appropriately be performed by the Postsecondary Education Commission; and some perceive the new range of activities, and the structure of the Intersegmental Coordinating Council in particular, as an additional level of bureaucracy.

Both the Commission and the Round Table, however, see a clear division of responsibility between them. For example, William Pickens, the executive director of the Commission, says that "for the most part" he does not believe that the Round Table's duties will unnecessarily duplicate those of the Commission, although he cautions that the Round Table must concern itself with the *administration* of programs, while the Commission remains committed to policy development and evaluation. There is little question that the expansion of intersegmental programs requires close attention to coordination of these efforts and that the Commission has, as a matter of policy, declined an administrative function because of possible conflicts with its role of evaluation. It is expected that the Round Table will forward reports on its activities periodically to the Commission and that these reports and the continued membership of the Commission's executive director on the Round Table will provide open lines of communication that will be useful in avoiding unnecessary duplication of effort.

Five Higher Education and the Economy

THROUGHOUT the United States, higher education is the focus of attention of public officials and business leaders because of their growing appreciation of the ways higher education contributes to economic development, competitiveness, and technology transfer. National and state officials are urgently searching for new ways to link business and higher education and to channel these cooperating forces into new activities contributing to the economy. A number of states are competing intensely for industries, government contracts and grants, foreign investment, and national research facilities.

In this competitive environment, California is in an unusually favorable position. The importance of its extensive, diverse system of higher education has long been understood in the state, in contrast to the neglect and erratic support seen in many other states. Moreover, public support for its system has been strong and virtually continuous since World War II. Consequently, by virtue of its size and scope, its system is a major element of and contributor to California's economy. Another consequence is that activities directed toward economic development in California can build on a strong foundation and be enhanced by the relative harmony among the segments of higher education, both public and private. An additional enhancement is a history of strong links between the various types of institutions and the business community. Above all, California's unique position on the edge of the Pacific Basin means that California is in proximity to the fastest growing sector of the international economy.

The Economic Impact of California Higher Education

California's colleges and universities have an incalculable impact on the state's economy through the contributions of their research and teaching to the expansion of business and industry and the increased employment skills, productivity, and earning power of their graduates. Apart from these indirect benefits, however, they have direct economic benefits for the state, simply as organizations or institutions, that at last report came to over $28 billion annually -- an amount equal to 8 percent of California's total gross product.

- Based on 1981-82 data -- the most recent available -- they added $3.8 billion to the state's economy merely through their institutional expenditures for supplies, equipment, and utilities.
- Their faculty and staff expended an additional $4.0 billion in payments for goods and services.
- Students from other states and foreign countries paid millions of dollars in tuition and fees, and spent millions more for living expenses -- contributing to total student expenditures of $3.8 billion.
- Visitors to California spent an estimated $82 million as tourists, audiences, and spectators on college and university campuses.
- Even more important economically, from all of these activities, California's colleges and uiversities generated at least $17.3 billion more in spin-off expenditures in their communities and generated some 965,000 jobs in businesses and industries serving higher education.

These conclusions stem from a 1983 study of the economic impact of higher education in the state undertaken by the three public segments and the independent segment as represented by the Association of Independent California Colleges and Universities. The study used the concept of the "expenditure multiplier" first employed for higher education in a highly influential study by Caffrey and Issacs published in 1971 by the American Council on Education and based on the widely accepted notion of economic exchange that when money is spent some portion remains in the community to be spent and respent in a ripple effect. The larger or more self-contained the area, more of the original expenditure is retained and the multiplier is larger (California Postsecondary Education Commission, January 1984).

Proceeding on the analytical basis provided by the Caffrey-Isaacs methodology, the four segments endorsed three other basic assumptions:

- Their analysis should be conservative in estimating the segments economic impact, rather than overestimating impact.
- Their analysis should apply to 1981-82 data, assuring a comprehensive array of data.
- Certain economic factors would be assumed to have neutral or canceling effects. Probably the most important of these involved real estate taxes foregone by the community where a campus or institution is located. These lost taxes were offset by higher real estate values for land adjacent to the campus and by other factors.

Based on these assumptions, the segments arrived at these conclusions:

University of California

The University of California estimated its direct economic impact as $8.6 billion, based on only two categories of expenditures -- purchases of goods and services and expenditures by University employees (Display 16, page 78). The University calculated that its students spent an additional $735 million, but it did not include these expenditures in its total because it assumed that they would have spent at the same level had they not been students. An estimated 308,000 jobs were created within the state as a direct result of University expenditures.

The University noted that only 30 percent of its budget was derived from state sources ($1.2 billion of $4.1 in 1981-82, excluding from that total $1.2 billion for the University's administering the federal energy laboratories at Livermore and Los Alamos). Thus the non-state portion amounted to $2.8 billion from federal sources, private grants and contracts, student fees, and fees from University services (health care, for example), which was approximately two-and-one-third times the amount provided by the state.

The California State University

The State University concluded that its direct expenditures and those of its staff, students, and visitors amounted to $2.1 billion in 1981-82, generating business activity of $2.9 billion for a direct impact in excess of $5.0 billion. Staff of the State University believed that an additional 191,629 jobs were created in 1981-82 throughout the state as a result of this broad range of activities and related expenditures.

State and local receipts derived from the direct and indirect activities of the State University were estimated to be $631,059,000. These receipts included real estate taxes paid by members of the State University community, other local revenues, revenues from student fees and charges, and the like. Not included were taxes paid as a result of the more than 190,000 jobs created by State University expenditures. These taxes might have added an additional billion dollars to the overall impact, according to the California Postsecondary Education Commission.

California Community Colleges

Based on 1981-82 data, the direct expenditures of the California Community Colleges were $2.8 billion. Added impact from the multiplier was estimated at $4.145 billion for a total impact of $6.9 billion. Total spending by faculty and staff were estimated to be in excess of $2.7 billion. Staff in the Chancellor's Office concluded that community college operations led to the creation

DISPLAY 16 Economic Impact of California College and University Expenditures, 1981-82

Source of Expenditure	Direct Expenditure	Added Impact of Multiplier	Total Economic Impact
University of California			
Institution	$ 1,970,000,000	$ 3,506,600,000	$ 5,476,600,000
Employees	1,140,000,000	2,029,200,000	3,169,200,000
Total	$ 3,110,000,000	$ 5,535,800,000	$ 8,645,800,000
The California State University			
Institution	$ 313,040,618	$ 428,865,647	$ 741,906,260
Faculty and Staff	581,597,858	796,789,065	1,378,386,923
Students	1,237,322,626	1,605,131,997	2,932,454,623
Visitors	28,000,000	38,360,000	66,360,000
Total	$ 2,159,961,102	$ 2,959,146,709	$ 5,119,107,811
California Community Colleges			
Institutions	$ 318,511,081	$ 447,766,621	$ 796,277,702
Faculty and Staff	1,401,662,096	2,102,493,144	3,504,155,240
Students	1,043,394,660	1,565,091,990	2,608,486,650
Total	$ 2,763,567,837	$ 4,145,351,755	$ 6,908,919,592
Accredited Independent Colleges and Universities			
Institutions (less payroll)	$ 1,367,700,000	$ 2,051,550,000	$ 3,419,250,000
Faculty and Staff	879,700,000	1,319,550,000	2,199,250,000
Students	789,700,000	1,184,550,000	1,974,250,000
Visitors	54,700,000	82,050,000	136,750,000
Total	$3,091,800,000	$ 4,637,700,000	$ 7,729,500,000
Total	$ 11,125,328,939	$ 17,277,998,464	$28,403,327,403

Source: California Postsecondary Education Commission, January 1984.

of 193,000 jobs and that at least 121,000 of these were outside the system itself. At that time, the system included 42 million square feet of space and 60,000 rooms in 3,500 structures on the far-flung campuses. Replacement value of these facilities was estimated at $5 billion. Total budget for the system from all sources was $1.8 billion.

Accredited Independent Colleges and Universities

For the member institutions of the Association of Independent California Colleges and Universities -- 60 accredited colleges and universities in 1981-82 -- total expenditures were $2.2 billion, of which only 2.6 percent ($58 million) came from the State of California in the form of student aid. Total economic impact from direct expenditures was estimated to be $7.7 billion. The association estimated that as a group the 60 institutions constituted California's twentieth largest private industry based on gross expenditures. In terms of numbers of employees, these independent institutions combined were exceeded only by the Bank of America, Pacific Telephone, and Lockheed.

The three major research institutions of the association calculated their expenditures in case studies:

- California Institute of Technology ("Caltech") attracted $435 million in out-of-state support, most of it from the federal government. It estimated total expenditures attributable to its employees, students and visitors at over $496 million in 1981-82.
- Stanford reported employing 10,000 persons, including 1,200 faculty, with a budget of $407 million ($143 million devoted to Stanford Hospital). Including faculty income from research and consulting, and student and visitor expenditures, its total direct economic impact exceeded $1.6 billion.
- The largest institution in the association -- the University of Southern California -- reported an instructional budget of $348.8 million for 1981-82. This included $71.4 million in federal funds and $91.3 million in tuition, fees and other expenses from out-of-state and foreign students. It estimated its total expenditures at $506.6 million, including faculty outside income, student and visitor expenditures, and investments and deposits in financial institutions, and its total net impact at well over $1 billion.

Despite the size of the total direct impact of the four segments, estimated to be $28.3 billion, the California Postsecondary Education Commission has stated that "in many ways, this direct impact is less important to the prosperity of California than the indirect and often intangible effects. These latter benefits, which derive from their stimulus to individual talent, have enormous effects on the state's standard of living . . ." (January 1984, p. 13).

California and the Pacific Rim

For some time it has been clear to the leaders of California government, business, and higher education that the future of California is increasingly linked to the nations that ring the Pacific Ocean. Included within this very broad range of nations are the two economic superpowers of Japan and the Soviet Union, the newly industrialized countries of Taiwan, and Hong Kong, the ASEAN nations of Brunei, Indonesia, Malaysia, the Philippines, Singapore, and Thailand, the nations of Central America and the west coast of South America, Australia, New Zealand, China -- an emerging but cautious giant -- and two very large trading partners of the United States, Canada and Mexico.

The special relationship that California has with many of these nations and its favorable location on the edge of the Pacific place California at the hub of trade with Pacific nations for the contiguous 48 states. Eighty percent of the trade now passing through the ports of California is with Pacific Rim nations, and trade with this group of countries is likely to increase rapidly. Twenty years ago, the Pacific Rim nations had a combined gross national product equal to one-third of the United States, but today their proportion has grown to two-thirds.

To expand trade with the Pacific region, California is facing strong competition from many other states, some far removed from the Pacific Coast, and all of whom are bidding for trading opportunities with Japan and other Pacific traders. (New initiatives from landlocked states are quite feasible. For example, in 1983, 48 percent of the exports in the Los Angeles customs region were shipped by air, as were slightly less than 20 percent of the imports.) Considerable cooperation and effort are therefore needed by the sectors of California's economy, government, and education. Much, of course, will depend on the strength of the dollar, the continued flow of foreign investment, and the degree of confidence foreign trading partners have in the way the United States is handling its own affairs. Nonetheless, there is much California can do to build on the broad base of Pacific trade the state now enjoys, and one way to do this is to capitalize on the strong ties that millions of Californians have with various nations of the Pacific.

An example of the importance attributed to increased understanding of California's connection with the Pacific Rim is the recent work done by the California Economic Development Corporation -- a non-profit group directed by a board appointed by the Governor and broadly representative of industry, agriculture, finance, education, and other areas. In an extremely informative study of the region, *California and the Pacific Rim: A Policy Agenda* (May 1986), the Corporation noted the following:

- California exports approximately 40 percent of its high technology products and up to 80 percent of its major agricultural crops.
- It attracts more foreign investment than any other state, much of it from Japan and Canada.
- It is the location for over 90 different banks, branches, and agencies from Pacific Rim countries.
- In 1983, direct foreign investment exceeded $27 billion in affiliates employing in excess of 250,000 persons. Of that amount, nearly $15.5 billion was from European nations.
- Foreign travelers, the majority from the Pacific Basin, spend over $3.5 billion in California annually.
- One California job out of ten depends on trade.
- Total trade passing through California ports amounts to about $94 billion annually.
- California's Pacific Rim trade in 1985 amounted to approximately $81 billion, with the state importing about twice as much as it exported.
- Total state trade has risen from $2.6 billion in 1960 to $94 billion in 1985. In recent years, exports have increased dramatically (an almost $24 billion increase from 1983 to 1985), while exports have grown quite slowly.
- Asian-Pacific immigration to California has totaled more than 700,000 since 1950, and over 505,000 since 1970. Over 35 percent of Asian-Americans graduate from college (double the national rate for whites) and have family incomes considerably above white median income.

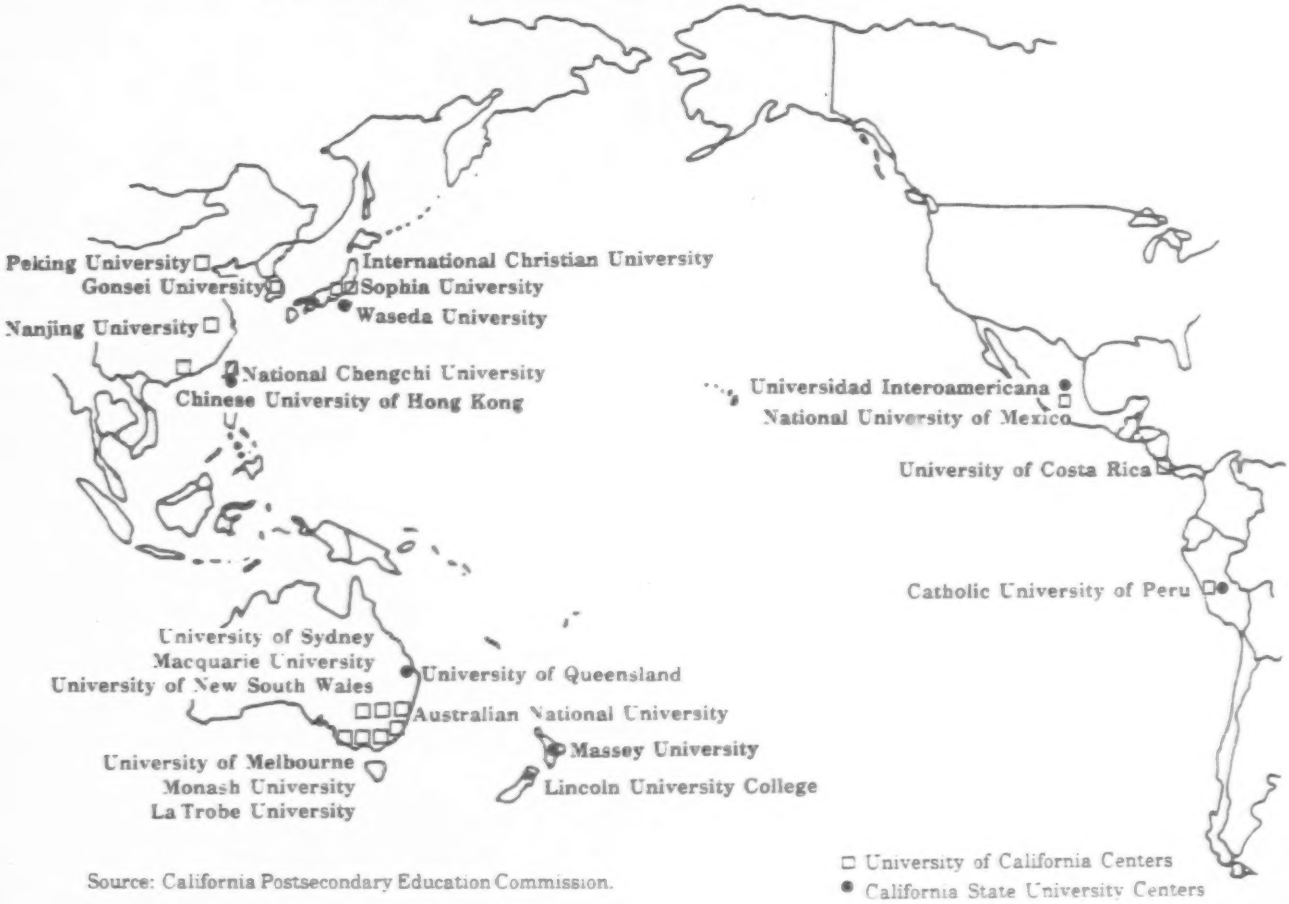
For the last several years, California's colleges and universities have been moving to strengthen ties with the Pacific Rim. They increasingly view persons native to one or another of the Pacific countries as assets to the state and links to the developing region, and while their Pacific Rim activities have varied from segment to segment, they have included language training and international education (particularly in international business), cultural and other studies, education abroad programs, and research encompassing experts from many disciplines. Their programs, activities, and new ventures include this sample:

University of California

The University of California is actively engaged in both teaching and research programs relating to the Pacific Basin. In the area of language instruction, all of its nine campuses offer Russian and Spanish, and six of its eight general campuses offer Japanese and Chinese. Some 65 graduate and undergraduate degrees are offered in languages, literature, and cultural and area studies, of which 24 pertain to Latin America. These programs enroll some 800 undergraduate majors and 400 graduate majors.

A particularly impressive feature of the University's international programs is its 15 study centers in the Pacific Rim (Display 17). In 1984-85, 123 University students spent a year studying in them. Plans exist to open centers in eight additional countries and expand these enrollments to more than 450 in 1988-89.

DISPLAY 17 Study Centers of the University of California and the California State University in Pacific-Rim Countries, 1987


Peking University ☐
Gonsei University ☐
Nanjing University ☐
International Christian University
Sophia University
Waseda University
National Chengchi University
Chinese University of Hong Kong
Universidad Interoamericana ●
National University of Mexico ☐
University of Costa Rica
Catholic University of Peru ☐●
University of Sydney
Macquarie University
University of New South Wales
University of Queensland
Australian National University
University of Melbourne
Monash University
La Trobe University
Massey University
Lincoln University College
☐ University of California Centers
● California State University Centers

Source: California Postsecondary Education Commission.

Among the University's organized research units studying areas of Pacific life, three focus on aspects of international or area studies research, and 13 centers specialize in research of the region. Two large efforts deserve mention here:

- *Graduate School of International Relations and Pacific Studies, San Diego:* This new school has as its primary purpose to bring together in new ways disciplinary areas which are now diffused among several departments at other institutions. It is the first professional school of international relations in the system. A goal is to create a fusion among disciplines and professions related to training and research in the region and to bring to bear elements of business and management, international relations and economics, science, medicine, engineering, history, culture, and language. Training will prepare students for careers in government, business, finance, foundations, journalism, international organizations, research and consulting. The school will conduct research to further understanding of the region, and will focus these efforts on trade, security, technology, and will address economic, political, social and cultural issues confronting nations of the basin. Maximum enrollment of 400 graduate and postgraduate students is planned for 1991-1992.
- *Center for Pacific Studies, Los Angeles:* This new center was created to provide a unified, multi-disciplinary and issue-oriented approach to the common concerns of the Pacific Rim. It will sponsor and publish research, organize conferences, develop curricula, and support cooperative study of area issues by scholars, public officials, business, community and media leaders. It will administer bilateral programs for student and faculty exchange, joint research, and institutional development that already exist for China, Japan, and Singapore.

The California State University

In 1986, the California State University established a Pacific Rim Commission to review ways in which it could relate more productively to the peoples, problems, and issues of the Pacific Basin. In January 1987, that commission issued its report, *The Future of the Pacific Is Now*, in which it concluded that the State University should take steps to internationalize its curriculum, stimulate interest in Pacific region languages, prepare teachers to assist students in gaining cultural understanding of the area, encourage faculty to interpret Pacific cultures and peoples to government and business, and foster interinstitutional cooperation to expand overseas study opportunity.

Of paramount importance to the group was the need to vastly increase familiarity with regional languages and culture, since "literacy in the language of another society is the initial and essential key to understanding that society." Characterizing most Americans abroad as "illiterate" in the host language, the commission went on to urge substantial, long-term efforts to solve the problem. It pinpointed the weakness of language programs throughout the system of education and called for immersion in language instruction from the earliest school experiences onward -- that is to say, from the first grade on. Of the nearly 4.1 million students enrolled in grades kindergarten through 12 of the California public schools, only 4,392 were studying Asian languages. To remedy this state of affairs, the commission recommended that foreign language instruction be a state requirement and that Asian languages receive emphasis in expanded programs. Numerous other initiatives within the State University were identified, including the State University's special role in training public school teachers in California. It urged renewed efforts to recruit persons speaking Pacific languages into teacher training programs and to restructure such programs so that all teacher candidates are thoroughly exposed to information about the region. And it proposed that the State University assist in the dissemination of information about the Pacific affairs to the public and state leaders.

Within the system, the Long Beach campus appears to be unusually involved in exchanges and cooperative agreement with Pacific Rim countries, with some 11 such arrangements. Other institutions with five or more programs are Fresno, Pomona, and Sacramento. Year-long programs at the upper-division and graduate level available to students at all 19 campuses of the system are operated by the State University's Office of International Programs. Programs in the Pacific region are limited to Australia, Japan, Mexico, New Zealand (two sites), Peru, and the Republic of China. About 65 to 70 State University students study annually in the Pacific area, compared to 364 in Europe. Increases in these programs will no doubt be made in the coming years, but national restrictions on numbers of student and the absence of necessary language preparation may well slow such progress. Funding is another major consideration of course, and consideration of financing expansion of programs in the segments will need to include discussion of student financial aid.

California Community Colleges

The California Community Colleges plan to focus their Pacific Rim efforts in three areas:

- Raising awareness in the general population of the importance of the Pacific area;
- Attracting students -- especially minority students -- into specialties relating to the Pacific, not only at the associate degree level, but also for transfer into baccalaureate majors at the State University and the University,

since they supply roughly one-half of all State University students and one-fourth of all University undergraduates.

- Supporting Pacific Rim-related economic development in local communities and assuring appropriate components in vocational preparation.

The colleges teach five Pacific Rim languages (Spanish, Japanese, Chinese, Russian, and Filipino), with Spanish accounting for 30,000 of these enrollments. Chinese, Russian, and Filipino accounted for a little less than 4,000 enrollments among them in 1986. Some colleges are exploring possible new regional studies programs, such as the existing Chinese Studies program at San Francisco City College, which has a strong language component.

The colleges seek to interest students in careers that relate to aspects of the Pacific Rim, and a number of them, such as San Francisco and Santa Barbara City Colleges, offer study abroad opportunities, either in their regular program or in summer session. Few of these programs are located in the Pacific Basin, however, and most of them tend to be of short duration, such as tours. Cost of study abroad is a major barrier to many if not most community college students.

In the area of economic development, the colleges see the need for close partnerships with government and business in order to provide the needed employee training. Arkansas, Florida, Georgia, Kentucky, and Massachusetts have had "partnership for development" programs for some time, but California has come late to this concept, at least as it relates to the community colleges. The colleges believe they can build on their well-developed local advisory councils for vocational education in order to strengthen these partnerships.

Among the colleges with local partnerships with businesses are these:

- Oxnard Community College has a World Trade Institute that is an adjunct of the region's world trade center. The Institute works with other local colleges to provide training in the use of the World Trade Network -- a system providing information on international business to local communities -- and it offers workshops and seminars and a Certificate in International Trade.
- Vista College-International Trade Institute offers training directed to the needs of local small business owners and managers. It offers courses in various aspects of international trade, export-import issues, and related language instruction, and it also offers a Certificate in International Trade.
- Other centers include the Pacific Rim Academy at Orange Coast College and the World Trade Center at Coastline College.

While the community colleges as a system have not developed definitive models to guide activities in the trade and competitiveness area, it is clear that expanded ties and networking with local business will be part of future developments. Regional efforts need to be encouraged by the state and by college leadership, and productive ties with local business need to be pursued to define more clearly the roles of the colleges and corporations.

Finally, nearly 23,000 of California's community college students in 1986 were graduates of foreign high schools in these areas of the Pacific Basin:

Southeast Asia	7,400
East Asia	5,033
Latin America	4,544
Philippines	4,327
Commonwealth Nations	1,468
Soviet Union	146

Accredited Independent Colleges and Universities

While little information is available on activities of many independent institutions, certain well-known programs illustrate Pacific Rim activities in this segment:

- For more than 25 years, the International Development Education Committee at Stanford has conducted a program on the role of education in developing countries. This interdisciplinary committee, with initial support from the Ford Foundation, has overseen a program of teaching and research that has trained more than 400 scholars who now hold influential positions in government and higher education. Persons trained in the program have come primarily from Japan, Korea, the Philippines, and Latin America.
- Northrop University, once an institution limited to a narrow technology curriculum but now a fully accredited member of the Association of Independent California Colleges and Universities, has a Master of Science degree in International Business and Taxation. According to University officials, its aim is to provide "an opportunity for people from technical and non-business fields to acquire management skills in high tech industry and commerce."
- The Monterey Institute of International Studies has long enjoyed a reputation as a trainer of interpreters and translators of foreign languages. Relatively new languages in the Institute's program are Japanese and Chinese. It has now begun to prepare teachers of these two languages plus Russian and Korean. Recently the Institute has reported a decided shift in enrollments toward languages of the Pacific. It offers three master's de-

gree programs: international management, international policy studies, and public administration. Students in these programs are required to demonstrate mastery of at least one foreign language.

Conclusions About the Pacific Rim

In its recent report, the California Economic Development Corporation presents an agenda for action for California that recognizes higher education as one of the great strengths on which the state can build. Among the special roles for higher education that it recommends, it includes most notably:

- Establishment of a center for translating foreign scientific journals and relevant documents to provide broad access to technological developments.
- Implementation of state policies to expand research and development to improve application of technology to production, particularly applied research in agriculture and "culturally-oriented" market research to reveal leads to new markets for California products.
- Increased retraining programs to assure a highly educated and trained work force for all projected skill levels.
- Internationalization of the curriculum, with special emphasis on language training and international studies generally.

In addition, the California Postsecondary Education Commission has noted that while enrollments in the initial phases of foreign language study are large, many languages suffer severe student attrition in the second and following years -- with the result that "legions of Californians have 'taken' a year or more of classes to learn a second language, only to stop short of meaningful competence and never enjoying using it" (June 1987b, p. 23).

Economic Development and Higher Education

From the foregoing pages, it can be seen that the importance of the Pacific Rim as a major component of economic activity in California has been widely recognized, as has the role that higher education must play in realizing its full potential. But the Pacific Rim is simply one area in which the state faces increased economic competition from other states. California's colleges and universities, together with its business community and state government, must face the challenge of forging new links that will permit higher education to contribute more effectively to the state's overall economic competitiveness.

The American Association of State Colleges and Universities observes that "higher education institutions in the United States constitute the single most significant resource that can influence economic development. They provide education and training that expand human capital. They conduct basic and applied research that generate new technologies, new products and new services. And they share the knowledge resources and the expertise that help transfer innovation from sector to sector and help American business maintain a competitive edge" (1986, p. v). Closer consultation among higher education, business, and government is needed to identify economic priorities and developmental goals that they can all support. Fortunately, California has a long history of productive relationships among these sectors. In moving forward, its colleges and universities will be able to use links to the business community that were built over a long period of time and embrace a remarkable array of activities in a number of modes, as the following examples illustrate.

University of California

Only a small sampling of ties between the University of California and industry and government need be mentioned to exemplify the vast array of cooperative activities at the University.

- At Davis, the Center for the Analysis of Western Agricultural Issues conducts research on complex agricultural problems facing the western states. The center was established by the California Legislature, involves industry representatives on its board, and disseminates the results of its analyses widely to industry and government.
- At Santa Barbara, the Center for Robotics Systems in Microelectronics -- one of six engineering research centers in the nation established and supported by the National Science Foundation (NSF) -- applies research on robotics and automated process control to advanced semiconductor devices, improving their fabrication, increasing yield, and reducing cost. Industrial corporations participate in the center's work in either of two ways: (1) Industrial "affiliates" pay to send one researcher to the center annually and to have access to experimental results, while industrial "sponsors" assign a number of researchers to the center and have early access to research results.
- At San Diego, the Supercomputer Research Center is a consortium of 19 educational and research institutions linked by remote terminals to its supercomputer. It is one of five NSF-supported centers on the topic and is supported by a combination of federal, state, and industrial funding.
- Through the Office of the President, MICRO (Microelectronics Innovation and Computer Research Opportunities) supports campus efforts through-

out the University to engage industry in microelectronics research, including enhancement of technology transfer and recruitment of promising students. University faculty propose projects to companies, and together they submit proposals to MICRO. If a company agrees to fund half of the research costs for an accepted proposal, MICRO will provide the other half. Faculty from five campuses review the proposals for MICRO, which was established with a $1 million appropriation from the state.

- And at Berkeley, the Center for Advanced Materials at the Lawrence Berkeley Laboratory combines the efforts of University and industry researchers toward the goals of exploring new ways of accelerating the transfer of technology to industry in the area of materials science.
- Because of the unusual interest in technology transfer generally, the University recently sponsored a conference on its role in technology transfer at which University and business leaders discussed models of technology transfer, the NSF's new multidisciplinary research centers, and the University's needs in improving technology transfer. One outcome was the establishment of a University task force on technology transfer that will include industry representatives in an effort to recommend strategies that the University should implement, such as the possible transferability to other industries of the cooperative or agricultural extension model that has been so successful in relaying research results to the field and expanding agricultural production as well as in transmitting the needs of agriculture to university researchers and other experts who can assist the implementation of research developments.

The California State University

The California State University has taken a leading role in human resources development through wide deployment of educational technology, with particular attention to television.

- California State University, Chico, is an experienced leader in the delivery of educational programs through state-of-the-art communication technology. It provides educational programs throughout 33,000 square miles of northern California. For example, it offers computer science degree programs to personnel at a distant U.S. Navy base, and in a cooperative arrangement with the Hewlett-Packard Corporation, it provides television instruction leading to a master's degree in computer science at ten Hewlett-Packard facilities in California, Colorado, Idaho, Oregon, and Washington. A feature of the Hewlett-Packard arrangement is that the corporation's employees in these several states who are enrolled in the program have access to Chico's machine readable library collection through computer technology.

- Another use of computer technology is illustrated by a service offered by the Fresno campus that permits agriculturalists in the Central Valley to subscribe to an information program that provides data on such topics as weather, crop rotation, and soil condition and problems.
- All 19 campuses of the State University have satellite "downlinks" to receive television signals from space, and 11 of the campuses can originate programming through "uplinks" for a satellite network that connects them with 600 California public schools and permits them to deliver instruction electronically to high school students and inservice courses to school teachers and administrators, including mathematics and science education updates and administrative skill development. These services are related to the state's long-range economic development because upgrading the public schools through college-school cooperation is imperative if California is to remain economically competitive in the twenty-first century. More immediately, the State University will be able to apply its satellite technology to other areas such as joint higher education/business ventures.
- As an example of State University activities beyond electronic instruction, the Applied Research and Design Center at the Sacramento campus has been called a model of university-industry collaboration in bringing together scientists and engineers from the campus and corporations such as Hewlett-Packard and Intel to work on projects that have ranged from improving the operation of local businesses to designing a new computer curriculum for the School of Engineering and creating a new extension learning center that concentrates on adapting workers' employment skills to new job demands.
- At San Luis Obispo, faculty of California Polytechnic State University are involved in research and outreach for local area industry through linkages with the Center for Robotics Systems in Microelectronics at the University of California, Santa Barbara.
- And the Dominguez Hills campus has opened a new program in microwave engineering after having been informed of the substantial need for the program by officials of the Hughes Aircraft Corporation.

California Community Colleges

Historically California's community colleges have been a major source of technically trained personnel for the state, since vocational education has been a major focus along with transfer education. More than one-third of their students mention a specific vocational purpose for enrolling, and two-thirds of all students take at least one vocational course. These high levels most likely will continue for the foreseeable future, since career changes are likely to be more frequent and continual upgrading of skills will be needed to deal with the demands of developing technologies. Among a sample of the colleges' vocational students, 43 percent report enrolling in order to build on their existing skills or current employment experience, while 35 percent want to upgrade their skills and 9 percent want to change careers entirely.

Keeping abreast of changing local occupational demands has long been a community college priority. This long-standing commitment will prove useful as the colleges devise new programs responding to the economic development needs of local businesses and, in particular, of small businesses and such emerging occupations as electron microscopy, laser technology, robotics, and biomedical instrumentation.

- As an indication of the quickening pace of such activity, the Northrop Corporation and several other aerospace companies have established a consortium with a dozen community colleges to help provide qualified technicians in rapidly changing technical fields.
- Pacific Bell -- the vast California-based telecommunications corporation -- has signed an agreement with the community college system to have the colleges serve it as a statewide retraining and counseling resource.
- And Hewlett-Packard, Olivetti U.S.A., and VISA U.S.A. have had specially designed courses prepared for their employees by the Foothill-DeAnza Community College District -- a district that exemplifies strong community ties and partnerships with business which enrich the educational process as well as the local economy. The Foothill-DeAnza district is favorably located in the heart of "Silicon Valley" on the southern San Francisco peninsula and is fortunate to have a constituency that is fully aware of the vital role of education in continuing the area's economic growth. As *The Chronicle of Higher Education* has noted, "with the computer industry constantly in flux, its products upgraded daily, companies must continually retrain their employees to remain competitive in the marketplace" (January 6, 1988, p. A3). To stay competitive, employers look for employees who are broadly and flexibly conversant with their fields. In meeting these needs, Foothill-DeAnza develops courses tailored to employers' requirements and offers them either at one of the district's two colleges or at company facilities through its contract instruction and interchange programs. This partnership between the district and industries of the area has proven to be mutually profitable: On the one hand, companies have benefited from the continual upgrading of skills among workers and their mastering of additional areas of expertise, while on the other, the two colleges have had state-of-the-art equipment donated to them by corporations, their faculty members have learned of new research results and new techniques from working with enrollees from industry, and most tangibly

they have enrolled more than 3,000 additional students annually through contract instruction and interchange.

Independent Colleges and Universities

Four institutions illustrate the range of economically related activities of California's independent sector of higher education.

- Stanford University has a unique history of interaction with business and industry in its symbiotic relation with high technology electronics companies. Its engineering faculty has been widely credited with stimulating the development of Silicon Valley; it offers graduate degree programs on a part-time basis through interactive television for engineers in nearby industry; and the business community has been an important source of its private funds -- contributing $33.5 million in 1986 out of Stanford's total private gifts of $179 million. Examples of synergistic programs between Stanford and the business community include the Stanford Center for Integrated Systems, which involves 18 microelectronic companies and Stanford's departments of electrical engineering and computer sciences. The center has as its goal innovations in the development of very large scale integrated electronic systems and the provision of corporate access to talent at Stanford, and it offers degree-credit courses to University students as well as short courses, conferences, and workshops to corporate professionals. In addition, Stanford's Officer of Technology Licensing works with Stanford faculty and staff to bring their inventions and other intellectual property developed as a result of University research to public benefit and use. Moreover, Stanford's decentralized program of "industrial affiliates" enables corporations through payment of a fee to belong to any of 34 departmental programs that are managed by faculty working in those disciplines and that emphasize interaction between company representatives and faculty, staff, and students.
- California Institute of Technology has a similar industrial associates program that provides corporate subscribers access to a variety of its resources. Its program in advanced technologies, organized in 1984, brings together industrial sponsors and faculty for research in materials, fluid dynamics, and electronics, with the industrial sponsors contributing to a pooled research fund and participating with faculty on an advisory committee that reviews research proposals and recommends funding. A new venture to be launched this fall -- the CalTech Industry/Partnership in Chemistry and Chemical Engineering -- will involve as many as five corporations in the support and direction of research in biochemistry, materials science, and advanced chemical techniques. Through its industrial relations center, CalTech makes courses and seminars in management and

engineering management available to local business. And a number of CalTech faculty are principals in private companies based on technologies developed at the institute -- a particularly effective mode of technology transfer.

- At the Claremont Graduate School, a mathematics clinic involving all students in its master's programs in applied mathematics allows these students to help solve real-life problems for corporations that are under contract with the school. Examples of projects in recent years include a model study for Rockwell International of the diffusion and transport of photochemical smog and a study for Lockheed of the impact of various numerical-analytical schemes on modeling turbulent air flow. The school conducts a similar program in the area of information sciences.
- Golden Gate University -- a San Francisco-based independent university primarily serving adult professionals in the financial industry -- not only draws heavily on practicing professionals as adjunct faculty but utilizes some 15 industry advisory committees to help it respond quickly and innovatively to new educational needs.

Private Schools

Another substantial provider of technical and occupationally-oriented training in California is its hundreds of proprietary (organized for profit) institutions. As of 1982, they enrolled an estimated 470,000 students -- of which about two-thirds were new that year -- who accounted for nearly half of all postsecondary vocational students in the state. Thirty-five percent of these schools were classified as offering technical courses, 23 percent as offering courses in business, 21 percent in cosmetology, 14 percent in health professions, and 6 percent in computer training. The bulk of students enrolled attended full time, paying tuition that ranged from around $1,700 to $3,600 (Commission for the Review of the Master Plan, March 1986, p. 51). Clearly, these institutions will continue to serve large numbers of Californians.

Looking to the Future

In his 1988 "State of the State" speech to the California Legislature, Governor Deukmejian declared that California faced stiff economic competition from nations and from other states:

> The opportunities awaiting us have never been greater. But the challenges confronting us have never been tougher. Our mission is to keep California on top in a world of growth and competition. With common

> sense policies from government, and a 100 percent commitment to quality from the people, California can enter the new century as America's higher performance state.

The Governor added that the state must begin its preparations to face the future in its schools. His words point to the reality that in the next several years, higher education will be engaged in a three-way dialogue with the state and with business as each tries to be mutually supportive of efforts designed to contribute to California's economic competitiveness.

One goal of that dialogue will be greater understanding by higher education institutions of the educational needs of business and industry on a continuing basis and how those needs relate to institutional missions and goals. Each institution's response will depend in part on its mission and the types of business and industry it believes it should serve; but all colleges and universities will need to involve faculty in this continuing dialogue, since faculty members will ultimately be instrumental in any work done as a result of these conversations and they must be convinced of the educational integrity of the partnership. Such consultative processes are now being explored within the segments, and changes in their traditional ties to the business community may be necessary. For instance, beyond their regular teaching and research activities, they may find that the flexibility of their extension programs (those offered outside their regular offerings for non-matriculated as well as matriculated students) afford new opportunities for crafting courses to meet the specific needs of business.

At the same time, the state and business can contribute greatly to the effectiveness of higher education in economic development. Many institutions will be unable to fully develop their potential as educators of skilled personnel unless they have regular access to modern, up-to-date equipment. Business can be very useful in supplying some of this equipment. And state support is vital for the enormously expensive facilities and instrumentation needed by research institutions. In this connection, recent developments in the federal budget are not encouraging to those who seek stable and consistent funding for research. While the federal government still allocates the bulk of its research funds on the basis of merit through the peer review process, the growing amount distributed as a result of pure political intervention is disturbing to research institutions throughout the nation.

Finally, one specific area where representatives of the state, business, and higher education need to take stock of how they work together is in the development of proposals for large scientific projects that require a unified bid from the state if it hopes to be chosen as the site for the project. A prime example is the nation's proposed Supercolliding Superconducter. The federal government is now reviewing a "short list" of seven states that have been chosen to be finalists in the final round of determining the location of this $4 billion facility. The winning state will reap enormous economic benefits from the enterprise, as thousands will be employed in operating it once it is operational; but California is not one of the seven. Even though its collective scientific resources and record for supporting higher education is very strong, it was rejected by a task force of scientists for unspecified reasons. Previously, California failed to be selected to be the site for a national center on earthquake research, for SEMATECH -- a collaboration of government, business and higher education for semiconductor-related research, and for the Microelectronics and Computer Technology Corporation -- a research corporation put together by a number of companies in the computer field. This series of reversals suggests that it is time to take stock of how the state, business, and public and independent higher education come together to develop these proposals. Certainly a more regular procedure is needed to minimize the political confusion that marked the state's development of its superconductor proposal.

Six The Educational Enterprise

CALIFORNIA'S system of higher education consists of a wide variety of learning environments -- from the flexibly scheduled day and evening classes for part-time students of the community colleges to the intimate learning-and-living residential experience for full-time students offered by small independent liberal arts colleges -- whose average student-faculty ratio of 10:1 is the lowest of any type of institution in the state. This variety supports the Master Plan's conception of balance in higher education, simultaneously offering open access to the community colleges and selective admission to public universities and independent institutions, thereby providing education to a large number of the state's young adults through offerings appropriate to the venue characteristic of each institution.

This chapter describes the size and scope of the educational enterprise in the major segments of California higher education and then explores current issues in undergraduate education and graduate education and research.

Size and Scope of the Enterprise

University of California

The University enrolls over 152,000 students on its nine campuses in baccalaureate, master's, doctoral, and professional programs. The campuses are not of equal size; they range from the smallest, Riverside, with 5,726 students in Fall 1986, to Los Angeles, with 34,423 students, or about 23 percent of the total.

Of the University's 1986 enrollment of 152,065 students, 64 percent were white; 14 percent were Asian; 4 percent were Black; 8 percent were Hispanic; 2 percent were Filipino; and fewer than 0.5 percent were American Indian. (All of these ethnic percentages are based on self-identification surveys, and in 1986, almost 4 percent of the University's students did not state their ethnicity. Appendix D describes the problems of such self-reported data.) Non-citizen enrollments (consisting of non-resident aliens, resident aliens, and refugees) are increasing, having accounted for almost 13 percent of the University's total enrollment in 1985. These non-citizen percentages differ by campus, accounting for over 15 percent of students at Los Angeles, over 14 percent at Berkeley, and 19 percent at Irvine.

More than 90 percent of the University's undergraduate student population falls into the "traditional" college-age group of 18 to 24-year olds, more than 90 percent of whom attend classes full time and graduate with a bachelor's degree in four to five years. In 1986, the undergraduate student body of 112,500 students was approximately evenly composed of men and women, while among graduate students, men outnumbered women by about three to two.

Unlike undergraduate admission, graduate admission to the University is limited by a fixed number of places. As a result, competition determines acceptance rather than defined standards of eligibility which, if met, guarantee undergraduate admission somewhere in the system. Graduate program enrollment is designed to realize a student body whose size, quality, diversity, and balance respond to the needs of the State and the nation for advanced training and research.

In 1985-86, the University awarded a total of 21,374 bachelor's degrees, 4,912 master's degrees, and 1,649 doctorates. Its professional schools conferred the following professional degrees in 1985-86 (University of California, September 1987a):

Teaching Credential, all campuses except San Francisco	327
Juris Doctor, Berkeley and Los Angeles	715
Medical Degrees, Davis, Irvine, Los Angeles, San Diego, and San Francisco	612
Dentistry (D.D.S.), Los Angeles and San Francisco	184
Optometry (D.O.), Berkeley	64
Pharmacology (Pharm.D.), San Francisco	109
Veterinary Medicine (D.V.M.), Davis	125

With over 563 regular degree programs and 43 professional schools, more than 11,000 programs and over 350,000 students in University Extension, and a 1986-87 budget of over $6 billion, the University is a vast enterprise whose educational activities are being significantly shaped by its relationship to the State's economy as well as by shifts in California's population as they affect student preparation and eligibility.

The California State University

In Fall 1986, the State University enrolled over 333,000 students in more than 1,500 bachelor's and master's degree programs in over 200 subject areas. Because of its primary responsibility for training California's public school teachers, the State University offers a variety of teaching and school service credential programs. Also, in cognizance of the needs of its students, and reflecting its role as a regional system, it offers large numbers of late-afternoon and evening classes so that students can complete degree requirements while working full time. In addition, off-campus degree, certificate, and credential programs are available to individuals for whom attendance on campus is prohibitive.

In 1985-86, the State University awarded 44,292 bachelor's degrees, 8,645 master's degrees, 12 joint doctorates, and 9,184 teaching credentials. Of those credentials, 2,587 were single subject, 4,058 were multiple subject, and 2,539 were advanced, which are required for administrative positions.

Student Characteristics: The more than 266,000 State University undergraduates are about the same age as University students when they matriculate as freshmen and younger than community college students. But enrollment patterns at the State University differ from those at the University. Of the State University's total undergraduate enrollment of 266,729 students in the fall of 1986, only 70 percent were enrolled full time. This may explain the slightly older age profile of its students, who are typically 19 years old as freshmen but 21 as sophomores, 23 as juniors, and almost 25 as seniors.

As of Fall 1986, State University graduate students numbered 32,513, of which 16 percent were enrolled full time. About 30 percent of its 34,182 post-baccalaureate students who were not enrolled in graduate programs were attending full time. These patterns are reflected in the average age of 30 for its master's degree candidates.

Financially dependent State University students -- the largest group for which statistics exist -- are approximately as wealthy as similar University students, in that their 1985 median income was only slightly lower, with almost half below the $24,000-35,999 annual income level and slightly more than half above. Nonetheless, more State University students' family incomes were under $12,000 than were those of University students' families.

Women outnumber men as State University students, comprising 53 percent of undergraduates and 59 percent of graduate students. Approximately 85 percent of all students are Californians, while foreign students constitute about 12 percent, mostly from China, Mexico, Iran, Hong Kong, South Korea, the Philippines, Indonesia, Canada, and India. The increasing numbers of foreign students point to the State University's growing role as a resource for economic development.

Of State University students reporting their ethnicity in 1985, 67 were white, 13 percent were Hispanic, 8 percent were Asian, another 8 percent were Black, slightly more than 2 percent were Filipino, and slightly more than 1 percent were American Indian.

Undergraduate enrollment trends at the State University are consistent with those nationwide. Of the 44,292 undergraduate degrees awarded by the campuses in 1985-86, 31 percent were in business, 21 percent were in professions other than business or education, another 21 percent were in humanities, almost 13 percent were in the social sciences, 6 percent were in mathematics and sciences, and 5 percent were in education.

Importance of Teacher Education: Teacher education has been a core function of institutions in the system from their earliest days as "normal schools" and then "teachers colleges" through the 1960 Master Plan's designation of teacher preparation as their primary responsibility. Today three issues have propelled the preparation of school teachers once again to the center of State University educational policy discussions: (1) concerns about quality teaching in the public schools, (2) the need to prepare large numbers of teachers over the next decade to replace retiring teachers, and (3) the desirability of increasing the number of minority teachers to serve as role models Presently, the State University trains around 70 percent of the new classroom teachers trained in California. For the next 15 years, it must bear an unusually heavy burden in helping meet the State's needs for highly qualified new teachers and for diversifying the teaching and administrative staff of the schools.

Overall, the education faculty of the State University appears to be as well-prepared as State University faculty generally, and perhaps more involved than most faculty in research in their specialty. Nearly 900 tenure-track faculty provide professional education for teachers. The bulk of them are full-time employees (65 percent), and serve in a department of teacher education (61 percent). Roughly equal proportions of them hold Ed.D. and Ph.D. degrees, and more than 88 percent hold terminal degrees, compared to 78 percent of faculty in all disciplines. Increasingly, education faculty are doing research related to educational problems, and in view of the magnitude of the learning-related problems to be investigated, this activity is expected to grow.

The State University has responded to the three challenges mentioned above by defining its responsibility for teacher education as embracing entire campuses and not just departments of education. Such a commitment calls for renewed involvement of faculty from diverse academic disciplines in helping develop and review campus policies and programs that affect teacher education, and the development by each campus of "responsibility" plans detailing collaboration among education and academic departments and with the public schools.

As a result of these planning exercises, a wide range of initiatives are now being directed at elements of the problems associated with the three major areas of need, as illustrated here:

- *Raising Standards of Teacher Education Programs:* In 1986, the State University's Trustees established new standards for admission to and completion of teacher preparation programs. A comprehensive structure is now in place systemwide for evaluating credential candidates. Provision is made for candidates who may not meet the published entrance and exit requirements when they can demonstrate compensating strengths, and where equity and access considerations must be considered. Academic requirements for entrance require grade-point averages in the top half of the undergraduate class classified by discipline. Examinations determine proficiency in fundamental skills of spoken and written English, reading, and mathematics, while interviews and other methods help determine professional aptitude.

- *Encouraging Teaching as a Career:* After a number of years when the status of teaching as a career has declined progressively, the State University has enlisted media assistance, launched intensive information campaigns at a number of campuses, and developed video and other messages aimed at prospective teachers. These all have the goal of reversing the negative public image of the teaching profession by putting forward a positive message of the rewards and true worth of a teaching career to persons considering career decisions.

- In addition, throughout the system, field-based experiences and special counseling are available to students contemplating teaching careers. Through these various experiences, students may judge their reaction to working with children and youth, experience at first hand the challenges of teaching, and evaluate their own aptitude for the field.

- *Recruiting Minority Teachers:* Programs on two campuses illustrate progress on this front:

  First, the Los Angeles campus participates with local high schools in operating a teaching academy that serves as a model for encouraging minority youth to prepare academically and experimentially to be teachers. Activities include tutoring of other students in various elementary and secondary schools, and counseling sessions for tutors.

  Second, the Dominguez Hills campus, in cooperation with the Los Angeles School District and Los Angeles Harbor College and with funds from the Carnegie Corporation of New York, is developing a model minority teacher recruitment program that involves faculty assistance to high schools in establishing future teacher projects, career conferences for high school students, academic assessment of these students, their tutoring by University students, and faculty mentoring. When fully developed, the model will be implemented at nine junior and senior high schools in the Dominguez Hills-Harbor College area.

These many-faceted efforts, which admittedly must continue for many years if the needs of the state are to be met, have shown early signs of achieving some of their goals. New admissions to State University teacher programs have increased significantly, with basic credential programs experiencing almost 30 percent enrollment growth through the two academic years of 1985-86 and 1986-87. Over 20,000 students are now enrolled in State University professional programs for elementary and secondary credentials. And through a sophisticated new data base developed in the Office of the Chancellor -- Teacher Education Data Systems -- State University and state officials can analyze teacher supply, evaluate teacher education programs and policies, and aid research on teacher preparation and related issues.

California Community Colleges

Enrollment in California's 106 community colleges peaked in 1981 at 1.43 million students but then declined precipitously before edging up again in the past two years, as shown in Display 11 on page 50 above. Reasons for these changes, and their impact on minority enrollments, are discussed in Chapter Nine and therefore are not repeated here.

At the time of the Master Plan, the community colleges offered a comprehensive two-year academic curriculum corresponding to the first two years of college that prepared students to transfer to four-year institutions, as well as vocational-technical training leading to employment. Subsequently, the mission of the community colleges was extended to respond to various needs by including civic or community instruction, substantial remediation programs, and extensive non-credit offerings. The community colleges have, therefore, the largest and most diversified of student bodies and range of educational goals. Due in some measure to the multiplication of its missions, the segment has been weakened, most noticeably in its transfer function; and in 1985-86, it awarded fewer than 45,000 associate of arts degrees.

Accredited Independent Colleges and Universities

In 1984-85, California's accredited independent institutions enrolled over 190,000 students and awarded 19,868 bachelor's degrees, 29,785 master's degrees, 6,146 professional degrees, and 3,716 doctorates. These degrees accounted for almost 23 percent of the state's baccalaureates awarded that year, 50 percent of its master's degrees, 70 percent of its professional degrees, and 46 percent of its doctorates. Three independent institutions -- California Institute of Technology, Stanford University, and the University of Southern California -- alone accounted for 30 percent of its doctorates in science and engineering.

In 1986, 20 percent of the state's undergraduates were enrolled in these institutions. Graduate programs in the professions are offered by two schools of architecture, three medical schools, three dental schools, 12 American Bar Association-accredited law schools, 13 engineering programs, and 40 teacher-training programs. Because independent institutions are not constrained by church-state considerations, a number of them also offer theology programs.

Economic profiles of students at independent institutions dispel the myth that this sector of higher education is reserved for the rich. Nonetheless, California residents enrolled in these institutions receive barely more than 2 percent of state expenditures for four-year higher education, and rising tuition costs have raised the question of continued access of California residents to them.

Non-Accredited Degree-Granting Institutions

In 1983-84, California's unaccredited colleges and universities enrolled some 8,500 students and awarded approximately 750 bachelor's degrees, 650 master's degrees, 130 professional degrees -- 60 of them in chiropractic, 50 in law, and 20 in theology -- and 1,000 doctorates.

Issues in Undergraduate Education

Within the diversity of higher education in California, the one function shared by all of its segments is undergraduate education, particularly the first two years or "lower division" of the curriculum. All four major segments share certain assumptions about the nature of this undergraduate curriculum that have emerged from the historical development of accessible higher education in America. Key to these assumptions is a balance of courses taken that will provide the student with appropriate *breadth* of subject matter, methodologies, and analysis, as well as sufficient *depth* in a particular area of academic specialization.

To ensure that students attain educational breadth, institutions provide that students must take a certain array of courses under the rubric of "general education." Typically, subjects falling under this rubric include writing, composition, history and literature, language, science, and interdisciplinary courses. From a relatively large list, students are guided to take a combination of courses that cover most of these general disciplinary areas.

As it has evolved over time, the general education portion of the undergraduate curriculum is fulfilled at most institutions with lower-division courses -- that is, courses taught at a beginning level in a particular discipline. (Among campuses that are exceptions to this generalization, the University of California, Davis, has designed its requirements so that students must take a certain percentage of their general education courses at the upper-division level.) These introductory courses also serve to expose students to the nature of a variety of disciplines, which will then help them to choose a major in which to specialize for the last two years of their undergraduate education.

Balancing General Education and the Major

It is through work in a particular academic major that institutions ensure academic depth. In this work, students concentrate on developing increasing knowledge, sophistication, and nuanced understanding of the methodologies, theoretical analyses and debates in their chosen discipline.

While many questions currently exist about the extent to which institutions have successfully balanced educational breadth and depth, these basic goals still guide the shaping of curriculum at California's colleges and universities. This has had certain important consequences in the state:

- First, since most of the lower-division coursework taken by students in these institutions fulfills general education requirements, attempts to articulate this coursework among segments has concentrated on the general education core of curriculum. Indeed, a key recommendation of the Commission for the Review of the Master Plan has been the intersegmental development of a core curriculum approved and implemented by all of the public segments. The Intersegmental Committee of the Faculty Senates of these institutions has worked for the past two years on design of such a "transfer core" that will serve for all students interested in transfer.

- Second, many of the debates over improvement of undergraduate curriculum have concentrated on the nature and implications of the courses offered. For instance, should breadth be measured by the extent to which students come away knowledgeable about the elements of Western civilization that have shaped their world? Or should it emphasize, instead, the increasing cultural pluralism of America (and, particularly, California) and expose them, instead, to an array of non-Western cultures and histories?

- Third, the precise weighting of breadth and depth has been under debate, as undergraduate majors have expanded to accommodate the expansion and increasing specialization of knowledge within the academic disciplines.

While all three of these issues have made it difficult to coordinate the educational efforts among the four segments of postsecondary education in California, problems of this nature are mechanically solvable. More profoundly difficult is to ensure the "fit" between institutions while still protecting the diversity among them. If much of the genius of the Master Plan has been its emphasis on the differentiation of function assigned to each public segment, then this differentiation must not be undermined by state imposition of a common lower-division educational experience. Moreover, the diversity so prized in California distinguishes campuses within the segment, as well as the segmental missions themselves. Within the University of California, for instance, the particular emphasis of the San Diego campus on the combination of research and undergraduate education has led it to a very different structure organized around undergraduate colleges than that used by most other University campuses. Similarly, the technical nature of California Polytechnic State University, San Luis Obispo, has shaped a very different undergraduate curriculum than that offered at many other State University campuses. The state has regarded such diversity as a positive educational accomplishment. It must, therefore, take great care when pursuing goals that coordinate the lower-division educational offerings at these very diverse institutions.

The Liberal Arts versus Occupationally Oriented Education

The debate about the weighting of breadth and depth in undergraduate education has been prompted in large part by long-term trends in student interests. Enrollment patterns among California's students have followed national trends, shifting away in recent years from the humanities and social sciences to occupationally oriented programs related to California's technological economy. Across the segments, the most popular fields, as measured by recent increases in degrees awarded, are computer and information sciences (where graduate degrees have increased by 160 percent over five years), engineering (where majors in electrical engineering have quadrupled), and communications, mathematics, and business administration, which has undergone dramatic increases at the bachelor's level.

Women's share of total degrees is steadily increasing, and more and more women are entering the high-demand disciplines of computer science, business administration, engineering, and communication. Similarly, minority students are entering fields in which they have traditionally been underrepresented, with business, engineering, and the social sciences now their most popular undergraduate fields. Large numbers of foreign students continue to receive advanced degrees, particularly in business and management, computer sciences and engineering; in 1985-86, foreign students in engineering at the University and State University received 14 percent of the bachelor's degrees, about 33 percent of all master's degrees, and approximately one-half of the doctorates in engineering awarded by the two segments.

This strong interest by students in majors that lead directly to lucrative employment opportunities has placed great stress on the shared assumptions that historically informed undergraduate curriculum. Institutions certainly have responded to "market interests," expanding or creating new programs in the fields detailed above. Most campuses, however, still regard their central purpose to be the provision of a more generalized "liberal arts" education (that is, coursework generally offered within the the scholarly disciplines that prepares students to be informed, articulate participants in their society). Indeed, the critics who have emerged to draw national attention to the shortcomings of undergraduate education have, by and large, come from within the educational community itself.

Recent evidence suggests that students themselves have begun to place increasing value on this unique period in their lives as an opportunity to explore a broader range of topics and disciplines as they pursue personal development. A 1987 study by the University of California of students who had required more than four years to attain their bachelor degrees revealed that nearly two-thirds cited the pursuit of a "personal interest" in extra courses as a reason for taking the extra time -- and more cited it than any other factor (November 1987, pp. 4-5).

The result of this quickened interest by educators and students alike in the traditional liberal arts is likely to have implications beyond the movement for undergraduate curricular reform. Of particular importance for California will be the reinvigoration of traditional liberal arts colleges -- both as independent institutions and on campuses of larger universities. On the larger research universities, too, the liberal arts are experiencing reinvigoration. Most widespread has been new and coordinated efforts relating to the humanities: Within the last two years, for instance, most University of California campuses have established humanities centers (involving interdisciplinary research activities that are expected to inform faculty teaching), and a new systemwide Humanities Institute has been opened on the Irvine campus.

Campuses of the California State University have had similar experiences. A number of opportunities are offered in a core of undergraduate degree programs in the traditional liberal arts disciplines and in selected professional studies programs. Emphasis is placed on the liberal arts program and on an extensive general education curriculum shared by all 19 campuses. This general education curriculum, introduced in 1982, is intended to counter the trend toward an undue emphasis on occupationally-oriented classwork.

As part of its curricular changes several years ago, the State University included the visual and performing arts as part of its admission requirements. Moreover, its faculty in the liberal arts pioneered interdisciplinary efforts with faculty in other disciplines. For instance, at California State University, Bakersfield, the philosophy department serves as the focal point for courses in ethics for business students and many of the pre-professional programs. Similarly, the Sonoma campus has become a national leader in efforts to encourage "critical thinking" not only within the liberal arts but also in professional disciplines.

Perhaps most revealing in this process of rediscovering the humanities, particularly in the new context of the state's cultural pluralism, is the planning of the first new college introduced in 14 years by the University of California, San Diego. "Fifth College" is scheduled to enroll its first class of 400 freshmen in Fall 1988. The focus of its academic plan is "internationalizing the curriculum"; and while its students will have access to all the majors offered by the campus, these majors will all have an international perspective. The College's general education requirements, moreover, will include a six-quarter world civilization course, an integrated humanities-social science sequence designed to help students think historically and across cultures and disciplines. Additional general education requirements will include two quarters of freshman writing, three quarters each of language and area studies, two quarters of fine arts, and two quarters each of mathematics and natural science. And Fifth College will also expect its students to spend time working or studying in a foreign country.

The environment in which the San Diego faculty has planned Fifth College also tells us much about the nature of American undergraduate education in a research university, for it planned the College's curriculum within a special campus context: the campus is also the site of a new Graduate School of International Relations and Pacific Studies, also opening in Fall 1988. The campus's long-range planning process, as well as its recruitment of new faculty and articulation of a specific direction for institutional research, has worked to address simultaneously new undergraduate educational needs and research/graduate training goals. The remainder of this chapter discusses these aspects of the educational enterprise -- graduate education and research -- and concludes with brief observations on the inter-relationship of undergraduate education with these other facets of the educational enterprise.

Graduate Education and Research

The University of California included in its 1988-89 budget proposal to the state this overview (September 1987b, pp. 5-6):

> As one of the nation's preeminent research institutions, the University provides a unique environment in which leading scholars and promising students strive to expand fundamental knowledge of human nature, society and the natural world. The University's basic research programs yield a multitude of benefits, ranging from the discovery of new knowledge, the excellence of the University's instructional programs, and direct impact on the State's and on the world's economy stemming from increases in industrial and agricultural productivity, to advances in health care and general improvements in the quality of life. A stimulating research environment at the University attracts outstanding faculty, enhancing the quality of education available to students at all levels.

This characterization suggests the ways in which American universities have developed a unique relationship between undergraduate teaching, the training of graduate students, and the creation of new knowledge through research. It is a relationship with particular economic implications for the state, as well as obvious personnel ramifications for all its postsecondary institutions, and one that has a unique history.

Functions of the American Research University

Basic research -- that "undertaken to understand the fundamental nature of things without the deliberate intention of solving a practical problem to achieve specific ulterior ends" (Ford Foundation, 1978, p. 28) -- has traditionally been the task assigned in America to academic institutions. As early as 1876, Daniel Coit Gilman -- the president of America's first research-oriented university, Johns Hopkins -- advocated that research, teaching, and community service should form its closely interrelated functions. Having left the presidency of the newly-founded University of California to launch Johns Hopkins, Gilman predicted that the pure research of the university could be applied to the problems of society to produce "less misery among the poor, less ignorance in the schools, less bigotry in the temple, less suffering in the hospital, less fraud in business, less folly in politics" (1898, p. 13).

This assumption that the research university had a trio of important missions carries within it, however, certain implied tensions that have not always been obvious. As late as the 1960 Master Plan, for instance, research and instruction were assumed to be generally compatible functions that did not require comment. Yet the dramatic escalation of federal funding for academic research that is described below has accentuated the tension inherent in the assignment of multiple missions. Clark Kerr may have been the first to assess these tensions and to offer advice on handling them. In his 1963 Godkin Lectures at Harvard published as *The Uses of the University*, he argued that the demand for new knowledge through research was transforming American universities with unprecedented rapidity. He proposed that they should respond to this demand and expand their capacity for research even at the cost of increasing their reliance on external sources of funding. At the same time, however, he warned that they must be alert to and attempt to resolve the dislocations, imbalances, and threats to institutional cohesion and integrity posed by these new conditions.

In California, several sources existed for these possible dislocations that emerge naturally from a research university's multiple missions. While they have doubtless been felt by the state's independent institutions, they have posed a particular problem for the state's public institutions. Even here, however, the effect has been felt differentially -- largely because of the differentiation of function between the University of California and the California State University decreed by the Master Plan:

- At the University, multiple missions have brought with them the full range of inherent tensions. For its mission of teaching there was, first, the difficulty in balancing the broad overview required for educating undergraduates with the more specialized training necessary for graduate students engaging in pure research. The expensive mission of research presented the challenge of protecting the University's institutional integrity in aligning research priorities with institutional goals while seeking outside funding. And the University's need as a publicly supported university to apply the results of pure research to public policy problems as a function of its "public service" mission, while maintaining its autonomy as a research institution, presented yet another possible imbalance.
- The State University has faced fewer but no less difficult problems, since its mission limited its graduate programs to certain professions and master's degree work, and because its realm of faculty research was defined as "instructionally-related." Its problems have related, in general, to the difficulty for faculty of remaining current in their fields and capable of conveying the sense of their disciplines when they do not receive state support for research, such as reduced teaching loads to encourage scholarly investigations.

Research and the State

The form that research funding has taken in America accentuates tensions among university functions. For instance, university research is supported from a variety of fund sources but, among these, the federal government provides the largest share, as it has done since World War II. Until that time, American science depended on private patronage. Government's role in stimulating the development of pure science has developed relatively recently; the scientific war effort of 1941-1945 was organized as an independent civilian enterprise under the direction of the Office of Scientific Research and Development and managed by industrial and academic scientists in equal partnership with military officers, rather than subordinate to them. This research was fully funded by the federal government but operated outside the civil service, with scientists remaining in their own institutions conducting research under contract.

This apparatus was retained, rather than dismantled, after the war in order to respond to a new set of national concerns, especially in nuclear energy and aerospace. These new technologies could hardly have been developed by the private sector alone; government filled the gap by establishing "national laboratories" to carry out major research projects in specific areas. Research was not limited to defense-oriented projects. When, in the 1960s, much national optimism prevailed about the possibility of solving social problems such as racism and poverty, the universities again received funds to support projects designed by humanists and social scientists to understand and remedy these problems. The tradition, then, of housing federally-funded research within a teaching environment is not a long one; nonetheless it has now become firmly entrenched in America.

Yet total governmental contributions have not kept pace with expanding research needs. Basic research costs have risen more rapidly than the general inflation rate, both because of the growing sophistication and complexity of scientific instrumentation, and because of the growing need for ancillary facilities, such as data banks. While the federal government continues to be the major contributor of funds to university research, its contributions have fluctuated significantly. After steady rises since 1972, the period between 1980 and 1982 was relatively flat. This instability has created the need to look to other sources of support in order to sustain research efforts at their current levels.

These twin developments -- the amalgamation of research and academic training on the one hand, and fluctuations in governmental support on the other -- have had important ramifications for research universities located in California, including most of the University of California campuses and many independent institutions. To fully understand the educational nature of the research enterprise in these institutions, the close relationship between graduate education and research requires examination.

The Relation of Graduate Education to Research

If research universities have played a central role in the state's economy, enabling it to remain competitive internationally, an important part of that role has related to graduate education. It is in the universities that replacement faculty are trained, that researchers are trained to work in "research and development" divisions of industry, and that the professionals necessary for staffing the infrastructure of the world's sixth largest economy receive their specialized training. Indeed, it has been argued that graduate education and research are the bedrock of every important area of national life: they support commerce and industry, are crucial to foreign policy and security, and are the foundation of hopes for enhancing American life and culture. That many forms of research in America are located within a teaching environment has had a profound influence on the size and nature of graduate education.

Three different functions may be described briefly to suggest the varying contributions made to the State by graduate education in California. These include (1) the training of new faculty and researchers to replace the current professoriate and to continue the search for new knowledge; (2) the training of professionals -- in law, medicine, business and the like -- essential to retain California's competitive edge; and (3) the conduct of research on, and the preparation of, teachers and administrators for the primary and secondary educational institutions in the state. These tasks have been taken on in distinctive ways, depending on their missions, by the California's public and independent institutions. The role played by the California State University, especially in terms of the third function, has been described in some detail earlier in this chapter. This section concludes, therefore, by looking particularly at the role played by the University of California and independent research universities in graduate education and research.

The University of California: In Fall 1986, the University enrolled 27,703 graduate students in 293 degree programs, plus 12,253 graduate students in the health sciences. Their potential contributions to the academy in general, to industry, and to the health professions may be suggested by listing the numbers of those fields in which the University conferred its largest number of degrees in 1985-86:

Field	Master's	Doctorates
Biological Sciences	251	429
Business and Management	875	28
Engineering	891	263
Law (J.D.)	--	701
Medicine (M.D.)	--	612

Field	Master's	Doctorates
Physical Sciences	244	353
Social Sciences	446	274

The University thus contributes to all three of the functions described above, but its results are clustered particularly, in the first two -- the training of new faculty and researchers, and professional preparation.

Graduate students receive hands-on experience by participating in the research projects conducted by their professors. They may encounter this experience first in the classroom, but many then go on to serve as paid research assistants -- employment that supports many students throughout much of their graduate training. Thus support received by the University for its research projects also significantly affects the size of its graduate education enterprise. In 1965-66, federal grants and contracts provided $78 million, or 64 percent of the University's total research expenditures, and a decade later, that percentage was up only slightly, to 68 percent. By 1984-85, however, its contribution of approximately $413 million had dropped to 59 percent, and its $448 million in 1985-86 dropped below 59 percent. Over the same two decades, the state's General Funds as a percentage of total University research expenditures dropped from almost 24 percent ($29 million) in 1965-66 to 17 percent ($52 million) in 1975-76 but then remained constant during the 1976-1986 decade, providing 18 percent of the total in 1985-66. These funds represented a constant proportion of between 9 and 10 percent of the state's total General Fund support to the University. At present, of the University's proposed $887 million expenditures for 1988-89, approximately 60 percent, or $481 million, is expected to come from the federal government. Other extramural funds of $170 million will come from the state's General Fund, $34 million from restricted funds (including approximately $1 million of special state funds); and $28 million from Regents' funds, for an expected total of $655 million.

State support of research at the University takes three forms:

- First, the state provides "block grants" to the University that may distribute these funds as it sees fit among several research categories. Most of this support goes to the organized units conducting research on each of the campuses. The California Postsecondary Education Commission has singled out this form of support as the most appropriate for the state because it enables the University to protect its institutional coherence and balance (February 1987b).

- Second, in recent years the state has begun providing funds for special areas through categorical augmentations. These topics usually represent public policy areas that the state and the University, through informal negotiations then validated through the budget process, have agreed are important issues on which the University's research resources should be brought to bear.

- Third, the state contributes to "departmental research," that portion of faculty time spent on research as a part of their normal workload of instruction, research, and public service. This figure is seldom broken out from the line item for instruction in the University's budget, since it is an estimate that depends on surveys of faculty workload to determine the average amount of time being devoted to research, but recent surveys suggest it ranges from 23 to 28 percent of faculty time.

The University frequently uses the first and third of these forms of support to fund research in the humanities and social sciences and help balance out state and federal emphases on the physical sciences.

In this context, it is important that, as the scope and magnitude of University research have increased, the relationship in California between private and public support monies has changed. The University has turned increasingly to private sources to forestall the erosion of its research programs. Its budget category of "private gifts, grants and contracts" has increased more than eighteen-fold since 1965-66 -- from $6 million or 5 percent of its total expenditures, to $110 million or 14 percent of these expenditures in 1985-86. It is likely that this increase from sources such as private industry will require the same institutional scrutiny that federal funding has prompted, so that the campuses may protect their institutional coherence and not have their priorities set by outside forces.

Within this general mix of funding sources and research priorities, the University must reconcile its various missions. Its ability and willingness to respond to state needs remains an important element in its credibility as a recipient of significant amounts of state funds, and its most recently proposed budget suggests how it does so: It proposes expanding research by $1 million in each of three areas -- (1) earthquakes, (2) new manufacturing technologies such as robotics, and (3) astrophysics and astronomy. It recommends $500,000 in expanded funding for research on problems of aging as well as on biotechnology and education. It proposes expanding research on forest and range watersheds by $400,000, on agricultural issues and on aquaculture and fisheries by $300,000, and on economic opportunities of the Pacific Rim by $250,000. Finally, it advocates sustaining AIDS research, whose ramifications will be critical for the nation at large, at its 1986-87 level of $9.2 million.

As noted earlier, the Master Plan assigns to the University the primary responsibility for research and graduate education in the state. Nonetheless, the University and the state have disagreed about funding for graduate enrollment. Authorized graduate enrollments (that is, those funded by the state budget) are lower than actual enrollments by 1,180 students. It is hoped that, as an outcome of the review of the Master Plan, some common accord will soon be reached to establish a graduate workload formula that supports the Master Plan's mandate to the University and that looks forward to the looming needs of the state.

Through its budget, the University also seeks to make graduate education less financially burdensome. It hopes to forestall the shortage of doctorally trained engineers and bring more graduate computer science students into the academic ranks by a $900,000 increase for graduate student research assistants in engineering and computer science. It proposes a $300,000 increase for doctoral students in community college administration in order to train community college leaders who understand institutional social, political, and economic environments and can apply research knowledge and skills to the solution of institutional problems. And because arts and humanities research support has lagged far behind that of the sciences and technologies, it has requested an additional $800,000 for graduate research assistantships to meet a projected increased demand for faculty in these fields.

The California State University: While the University of California has been recognized as the state's principal academic agency for research since 1960, the State University has been increasingly involved with both doctoral training and research since then. Both of these involvements stem from the Master Plan, which permitted joint doctoral programs between the two systems and which authorized faculty research in the State University to the extent it was consistent with the system's primary function of instruction. Recently, the Commission for the Review of the Master Plan reviewed issues of the doctorate and research at the State University in light of their relationship to undergraduate instruction, and its analysis has served to add new dimensions to discussions of the mission of the State University.

- *Joint Doctorates:* Over the years, joint doctoral programs have grown both in number and enrollments, but their growth has been slowed by the state's reluctance to fund the programs fully and by some problems stemming from the very nature of joint programs. Currently, seven doctoral programs are operated jointly by campuses of the State University and the University of California, and one program involves San Diego State University and the Claremont Graduate School. Of these eight programs, three are in the area of education, while one each is in chemistry, ecology, biology, clinical psychology, and applied mechanics. Within the State University system, San Diego State University is involved in five of the programs, while San Francisco State University and California State University, Los Angeles, each participate in one. Within the University of California, the San Diego campus participates in four, while the Berkeley, Los Angeles, and Davis campuses each cooperate in one. In Fall 1985, 100 students were enrolled in these programs, which awarded 12 joint doctoral degrees during the 1985-86 academic year -- down from a record of 14 in 1983-84.

- *Faculty Research:* Research has grown steadily within the State University, despite the state's reluctance to fund instructionally related research authorized in the Master Plan. Funding for research in the system exceeded $115 million in the year ending June 30, 1987. Nearly $95 million of this amount came from the federal and state governments, with the federal government underwriting more than half -- $60.3 million. The state accounted for $34.0 million of the total, and tax-exempt foundations and other organizations contributed $7.2 million. Among the 19 campuses, San Diego State University attracted nearly 25 percent of the funding -- $28 million. Long Beach accounted for nearly $10 million; four other campuses exceeded $8 million (Los Angeles, San Francisco, Sacramento, and San Jose); and two others exceeded $6 million (Chico and Fresno). This level of funding for the system is impressive and no doubt will grow.

It should be borne in mind that research in the State University, as in other comprehensive universities generally, encompasses a wide variety of faculty service, consulting, testing of products and materials, and a considerable amount of applied research. It has been suggested that the large number of highly-trained and qualified faculty on the State University campuses, particularly in the sciences, presents unique opportunities for professional advancement, economic development on a regional basis, and enrichment of undergraduate teaching through improved research opportunities for faculty.

Recent discussions suggest that the nation's comprehensive universities such as the State University grant most of it master's degrees and about half of its baccalaureate degrees. In spite of their many contributions to the educational development of the country, the faculty on these campuses often lack the necessary equipment to carry on a level of advanced research that informs their teaching, and thus are unable to update their scholarly skills. Thus a potential resource in reducing scientific illiteracy and overcoming the learning problems of the educationally disadvantaged is not fully utilized. Increasingly, the lack of adequate research opportunities and equipment at these institutions is seen not as protecting good teaching but as inhibiting and restricting it (*Science,* February 12, 1988, p. 705)

The state's 1988-89 budget, sent by the Governor to the Legislature in recent weeks, would allocate $2.5 million to establish a program of state support for faculty research at the State University. These funds would be used for grants, summer scholarships, and leave of absence to allow faculty to conduct research. As this initiative is now proposed, the State University would make annual reports on its use of the funds, and a full evaluation would be conducted at the end of the second year. If such funding is not only provided but also found to be beneficial in terms of its impact on teaching and faculty recruitment and promotion, it would go far in clarifying the state's position regarding faculty research in the State University by funding it as a matter of continuing state policy.

Independent Universities: California's independent research universities do not face direct political pressures in the form of the state budget process. Nevertheless, as institutions embedded in and relying on support from their communities, they still must demonstrate a responsiveness to California issues in their particular style of combining research, instruction, and public service. As noted above, they prepare approximately half of the state's graduate degree recipients, and over two-thirds of its professional degree holders.

The University of Southern California (USC) is California's largest independent research university. As such, it exemplifies the contribution of independent institutions to graduate and professional training. It enrolls somewhat over 14,000 full-time-equivalent graduate and professional students, one-fifth of whom are international students, one-fourth minority students, and approximately one-third women. Sixty percent of these students are distributed across the following fields:

Field	Number of Students
Business	1,154
Cinema-Television	253
Dentistry	695
Education	853
Engineering	1,735
Law	580
Letters, Arts, and Sciences	1,521
Medicine	686
Pharmacy	643
Public Administration	432

The other 40 percent are located in such smaller fields as architecture, communications, drama, fine arts, gerontology, music, nursing, occupational therapy, physical therapy, safety and systems management, social work, and urban and regional planning. These students can earn a master's of arts in 40 program areas, a master's of science in 59 program areas, master's level degrees in 19 additional specialized professional programs, and doctoral degrees in 65 disciplinary and nine professional programs (leading to a M.D., J.D., and Ed.D. for example).

The University awards approximately 4,000 graduate degrees and certificates annually, including slightly fewer than 3,000 master's level degrees and certificates, about 700 professional doctoral degrees, and some 300 Ph.D.s.

Interrelationship of Research with Graduate and Undergraduate Education

California's universities recognize the essential and fundamental link between research and graduate education and thus incorporate graduate students in all phases of faculty research. This collaboration benefits both faculty and students (undergraduate as well as graduate) alike and has important consequences for the institution as well. Research collaboration both advances new knowledge and offers students an opportunity to work closely with faculty, develop skills of inquiry and problem-solving, and acquire concrete knowledge in a discipline. The collaborative endeavor may take a variety of shapes, depending on the discipline. It may involve working on research teams in the laboratory or in the field, or researching in the library and/or examining primary evidence in the humanities. Research helps shape the institution, often stimulating curricular change, improved course development, and teaching materials. These changes clearly affect undergraduate education as well. As the state pursues discussions about assessment and evaluation of the quality of undergraduate education offered to California students, its measures will need to take into account the distinctive educational experiences that only research universities can offer to students.

It is important to understand this connection between research and undergraduate education since one criticism of undergraduate education, has often been that teaching "suffers" at the expense of undue emphasis on research. However, recent discussion in California has made it abundantly clear that faculty from each of the postsecondary segments see some form of research as appropriate to its role and enlivening for students and faculty alike. Whether engaged in research that is defined as "instructionally-related" (as it is for the State University) or as the discovery of new knowledge (as it is for full-fledged research universities), few faculty view the relationship between research and teaching in the antithetical terms used by nonacademic critics. The task of the next few years will be to give concrete curricular expression to their interrelationship.

Seven Quality and Reform

UNDERGRADUATE education has recently been the focus of intense scrutiny and debate, both at the national level and in California. Educational costs have been soaring, leaving a generation of graduates with tremendously burdensome debts in a time of general uncertainty about the future; technology has been expanding; popular programs in technology have become oversubscribed and increasingly specialized; and the relationship between education and professional life appears increasingly tenuous. Indeed, American pragmatism has been laying siege to its colleges' longstanding tradition of liberal education.

Since the 1983 publication of *A Nation at Risk* by the National Commission on Excellence in Education, which focused on the public schools and pointed to the interdependence of these schools and postsecondary education, a number of reports have expressed concern about the generally poor preparation and performance of America's college students. Fundamental questions have been raised by educators, legislators, and others about the nature, quality, and cost of undergraduate education; the extent of student access and achievement; the need for better assessment and evaluative standards; and the role that colleges should play in the well-being of the nation.

- William Bennett, currently U.S. Secretary of Education, has urged that "colleges and universities must reshape their undergraduate curricula based on a clear vision of what constitutes an educated person, regardless of major, and on the study of history, philosophy, languages, and literature" (1984, p. 2).
- The Association of American Colleges has warned that "the major in most colleges is little more than a gathering of courses taken in one department, lacking structure and depth, . . . or emphasizing content to the neglect of the essential style of inquiry on which the content is based . . ." (1985, p. 2). To stem this trend toward overspecialization and narrow professionalism, the association has advocated a revitalized and unified curriculum, articulated either by numbers of required courses or by length of time devoted to liberal education.
- The Study Group on the Conditions of Excellence in American Higher Education has observed that "the realities of student learning, curricular coherence, the quality of facilities, faculty morale, and academic standards no longer measure up to our expectations . . . . The quality of undergraduate education could be significantly improved if colleges would apply exist-

ing knowledge about three critical conditions of excellence -- (1) student involvement, (2) high expectations, and (3) assessment and feedback" (1984, pp. 8, 17).

Given the dwindling numbers of students interested in teaching careers and the projected shortage of teachers within the next decade, other reports have urged that teacher recruitment be placed high on the agendas of coordinating agencies and governing boards, as well as colleges and universities.

Several reports have also urged that standards be established for student placement in college-level courses and that remedial courses not be awarded college credit. They have also called for increased student involvement with faculty, with the arts, with government and business, and with environmental and social issues -- for example, through service internships -- in order to increase active participation in their education.

Much attention has been paid in the reports to the role of resource allocation in improving quality. Recommendations regarding assessment range from the establishment of means to measure students' progress demonstrable effectiveness of programs, and faculty. In general, the theme was that some measure must be established to assess and to evaluate program effectiveness. This emphasis on accountability and evaluation has been, perhaps, the most far-reaching result of this national discussion. A new element emerging from the debate over undergraduate education is an interest in measuring student learning directly. Legislators in a number of states, including California, are interested in outcomes assessment as measured by testing graduating students. They are also interested in "value-added" measures derived by comparing the results of tests administered to entering freshmen with those given to graduating seniors. As a next step, some legislators propose that some portion of institutional budget be tied to the results of these new assessment measures, and some states have already implemented this value-added budgeting mechanism.

This chapter describes current assessment practices in California and illustrates changes that institutions are undertaking in response to concerns about quality and assessment.

Maintenance of Quality

While the recent preoccupation with the state of undergraduate education has focused public and legislative attention on quality and qualitative measures, California's institutions of higher education have long been concerned with this problem. Individually and collectively, they have used a variety of approaches to assure quality -- two of the most significant being their own well-defined program review procedures and institutional accreditation by regional accrediting associations.

Institutional Program Review

Evaluation of educational programs on a regular basis has become almost universal in higher education. Approximately 80 percent of colleges and universities surveyed in 1982 used some formal review procedure (Barak, 1982, p. 34). Program review has at least three major goals -- to improve program quality, assist in the allocation of resources, and aid overall academic planning processes. Institutions also use the results of reviews to adjust curriculum, the direction or emphasis of programs, and faculty effort and activity. Properly conceived and carried out program review can be a powerful tool to achieve program improvement and campus balance. Programs may on occasion be phased out or consolidated as a result of reviews, but this result is only one and by no means the most likely outcome of effective review processes.

At the University of California, responsibility for the content and quality of academic programs and instruction rests with the faculty, on delegation from the Regents. Generally, departments plan and revise curricular offerings and set requirements for majors and graduate degrees that are reviewed regularly at five-year intervals.

At the California State University, a formal requirement for qualitative review of existing programs has been in place since 1971, and its approach to program review illustrates a mature review system. Review criteria and procedures are tailored to the needs, priorities and structures of the 19 individual campuses. Each campus has its own policies and procedures so that there is no single systemwide model, but generally, all of them review their programs every five years, as does the University of California. Usually a departmental self-study initiates the review process by addressing specified topics and questions and surveying students, faculty and alumni on occasion. After completion of the self-study, external reviewers visit the campus to interview interested parties, including students, to review the self-study and comment on aspects of the program. At some campuses, the comments of the external reviewers and the self-study form a basis for recommendations by a faculty committee to the responsible administrators at the departmental and campus level.

Annually, a report on program review in the State University is prepared by the Office of the Chancellor and forwarded to the Trustees. This report outlines for each campus the special features of the campus review process and summarizes the highlights and outcomes of the review for each program examined. At large campuses such as Fresno, Long Beach, and San Diego, between 10 and 15 reviews are scheduled annually.

Institutional Accreditation

Non-governmental, voluntary accreditation is a distinctive feature of American higher education which involves periodic peer review of institutions that they use as one means of improving effectiveness and quality. Nationally, six regional associations perform accreditation of general collegiate institutions. A number of national accrediting associations accredit limited-purpose institutions in such areas as vocational education and bible education, while specialized accrediting agencies review certain specialized curricula offered by accredited institutions. A national association of institutions and accrediting associations -- the Council on Postsecondary Accreditation -- concerns itself with general standards and coordinating issues relating to accreditation. The Division of Eligibility and Agency Evaluation in the federal government's Department of Education confers recognition on accrediting agencies eligible to certify institutions, which are then in turn eligible to enroll students who have received federal student grants and guaranteed loans.

The Western Association of Schools and Colleges is the regional association that accredits secondary schools, colleges, and universities in California. For the purposes of accrediting colleges and universities, it operates through two commissions -- the Accrediting Commission for Senior Colleges and Universities, which accredits four-year institutions, and the Accrediting Commission for Community and Junior Colleges, which accredits two-year institutions. (More information about the association and its commissions appears on pp. 22-23 above.)

Typically, an institution being accredited by either commission first prepares a major self-study of all central functions of institutional operations. Usually this entails a campus-wide effort, which is often linked to the institutional academic planning cycle. Copies of the study are provided to the accrediting commission, which then sends a visiting team for a three-day visit to the campus. The team spends this time talking with administrators, faculty members, and students and observing various aspects of campus life. The team then prepares a report on the institution, copies of which are sent to the college and the commission. The report is based on the original self-study and the findings that emerged from the visit. While the report may be modified after the findings have been discussed with the institution (for example, after submission of clarifying information), it is the team report that serves as the basis for the final action of the relevant commission to confer or withhold accreditation. Accreditation is usually for a ten-year period, with a much shorter reassessment being done five years after the last accreditation visit. While the ultimate result of the process is the conferral of accreditation, a valuable outcome of the entire process is that through the self-study and the necessary involvement of many campus constituencies in its preparation much will be learned that will fuel institutional change and reassessment.

New developments in ways in which accreditation is conducted in California have been an effort by the association to achieve greater participation of administrators and board members from multi-campus systems in what has been previously a campus affair. Also, like other regional accrediting associations, the Western Association has responded to the concern over undergraduate education by exhibiting increased interest in student outcomes assessment. Under new guidelines regarding the measurement of student competencies, it presumably will seek some evidence of institutional efforts to assess student competence as part of its accreditation review. Another of its concerns in recent years has been to balance the often competing requirements of quality assessment and innovation in existing and new institutions. Because it believes that existing law confuses the public perception of acreditation and other forms of licensure, the association is seeking clarification in existing law to ensure the integrity and distinctiveness of the different processes.

Licensure of Private Institutions

Within the private education sector in California, institutional quality and licensure are addressed through a complicated set of processes and procedures. Those procedures dealing with unaccredited institutions have been the source of continuing controversy in recent years and were discussed at some length in the proceedings of the Commission for the Review of the Master Plan. The alternative processes for evaluation of degree granting institutions in the private sector include recognition of accreditation by the Western Association of Schools and Colleges; approval and authorization overseen by the Private Postsecondary Education Division of the State Department of Education; and special licensing arrangements for schools of theology and for out-of-state accredited institutions that offer programs in California. More than 350 independent and private universities and colleges in California are licensed under the following provisions:

Accreditation (in-state)	193
Accreditation (out-of-state)	12
Approval	71
Authorization	85
Schools of theology	8

In addition to these institutions, the State Department of Education reports that approximately 1,800 non-degree granting private vocational institutions are operating in the state under four modes of licensure. Of these licensure arrangements, by far the most heavily used is an approval method, under the provisions of which nearly 1,700 institutions are licensed. (A December 1987 report by the California Postsecondary Education Commission, *The State's Role in Promoting Quality in Private Postsecondary Education Institutions*, details the several methods of licensure for both private degree-granting and non-degree-granting institutions.)

No public funds are allocated by California for the support of the oversight responsibilities of state agencies that review and license private institutions. The Postsecondary Education Commission, which has actively monitored the adequacy of State licensing provisions, notes that in spite of definite strengthening of minimum standards in recent years, "California continues to have a reputation as a haven for private institutions that award easy degrees" (December 1987, p. 1).

By September 1, 1989, the Commission is required under state law to review and evaluate the effectiveness of existing law and the implementation of this law by the State Department of Education. The Commission for the Review of the Master Plan urged that this evaluation include consideration of the consolidation of the approval and authorization methods of licensure for non-accredited degree granting institutions, and a single licensing method for all private institutions. In addition, it urged the Postsecondary Education Commission to consider prohibiting non-accredited institutions from offering graduate degrees as well as the possibility of requiring all institutions to achieve accreditation within some stipulated time period.

There is strong evidence that some consumers of educational services have been confused as to whether degree-granting institutions licensed under the approval process are in fact accredited. As indicated above, the Western Association has suggested clarification of statutory provisions that have created two superficially similar but fundamentally different methods of licensure. Not only does the Postsecondary Education Commission plan to review that question but also to consider the multiplicity of jurisdictions now involved in licensing private institutions, the justification for the many methods of licensing degree-granting and vocational institutions, the rigor of the state process, the need for some state funding of the licensing mechanisms, and, finally, the appropriateness of the current division of responsibility for licensure.

Undergraduate Reform in California

The national reports that have paid particular attention to issues of accountability, evaluation, and reform have appeared during a time when California was already engaged in a review of its system of higher education by its Commission for the Review of the Master Plan for Higher Education and when many institutions in the state were already focusing on undergraduate reform and assessment independently. (For an overview of the significance of general education in the undergraduate curriculum, see pp. 104-105 of Chapter Five.) The diversity of California higher education means that there is a wide diversity of approaches to the improvement of undergraduate education and assessment of student outcomes. Because of the close relationship between these reform and assessment efforts, the following description of current reform activities of the public segments therefore includes information on their efforts at student assessment.

University of California

In September 1985, the University's Office of the President appointed a special task force to undertake a review of lower-division education in the University. The task force worked for nine months surveying undergraduate programs on the eight general campuses and preparing a progress report in February 1986 and a final report in June 1986. Its final report, *Lower Division Education in the University of California*, soon became known as the "Smelser Report," after its chair, Neil J. Smelser, University Professor of sociology on the Berkeley campus.

Although its report was less gloomy than that of the major national reports, the task force identified a number of problems and made more than a dozen recommendations for change, including the following:

- *Reforming curricula and programs:* A radical expansion of freshman-sophomore seminars and a greater emphasis on international, multicultural, and global learning experiences of students.
- *Improving the quality of teaching:* The assignment of brilliant and effective teachers to larger lower division courses; improvement in the evaluation of teaching of both Academic Senate and non-Senate faculty; and improved selection, training, supervision, and evaluation of teaching assistants.
- *Improving educational continuity:* Greater access for freshmen and sophomores to important lower-division courses from which they are now sometimes excluded, and development of several curricular arrangements to

simplify the process of transfer of students to the campuses of the University from other institutions in the state.

- *Improving information and quality control:* Development of a better informational base on the respective roles of different categories of instructors (Senate, non-Senate, teaching assistant), and improvement of the process of review of the lower-division years as such.
- *Reaffirming the general mission of the University:* Long-term attention to possible imbalances in the University between the natural and life sciences and other branches of learning, between specialization and professionalization on the one hand and general education on the other, and between technical and general education.

The Office of the President gave maximum dissemination to the task force report, which generated a great deal of interest throughout the University, in Sacramento, and in the press. In 1987, the California Legislature responded to a budgetary request from the Office of the President by authorizing $750,000 in the 1987-88 budget for improving the training of teaching assistants. The Regents devoted two of their three policy meetings in 1986-87, as well as one of their regular meetings, to in-depth discussions of undergraduate education and its reform; and they have continued to support significant expansion of the University's international exchange programs, particularly in the Pacific Rim nations. The Office of the President requested and received responses from the eight general campuses on activities undertaken in relation to the report, and it established a new advisory committee to the president on undergraduate education, which will (1) monitor reform efforts throughout the University, (2) make efforts to improve the information-base on undergraduate teaching and education, and (3) advise the president on University policies and positions on undergraduate education. Currently the office is actively considering the idea of an all-faculty conference on the subject of undergraduate education.

Since the release of the report, campus reforms have been highly diverse, depending in part on the distinctive traditions of each campus. Nonetheless, the following main lines of change can be distinguished:

- Education abroad programs have been expanded and a fifth college created on the San Diego campus with special stress on international studies.
- Two campuses have already adopted an undergraduate requirement for one course in ethnic studies, and virtually all campus divisions of the Academic Senate are working toward reforming and expanding this area of study.
- More than half the campuses will expand their freshman-sophomore seminar programs, some by selective recruitment of emeriti.

- Several campuses have already made steps to improve the orientation and training of teaching assistants, even in advance of the augmented state funds dedicated to that purpose.
- Almost every campus has instituted a requirement for skill in spoken English for teaching assistants whose first language is not English.
- Campus committees on academic personnel and on teaching are paralleling the systemwide efforts to improve the criteria for evaluating undergraduate teaching and to implement these criteria in the faculty review process.

The California State University[1]

In Fall 1985, the Academic Senate of the State University conducted an in-depth and critical evaluation of undergraduate education in relation to three of the national reports describing a crisis in American education. It established seven subcommittees to study the system's mission and goals, curriculum, learning, instruction, faculty, campus community, governance, and academic freedom. With respect to the curriculum, the senate concluded that the State University's general education-breadth policy (established in 1981) conformed in spirit to the recommendations of the national reports. That policy advocates an integrated approach to achieve the system's educational objectives, including "emphasis on the development of such broad-based abilities and skills as critical thinking; logical analysis and synthesis; communication; and the development of an understanding and appreciation of the principles, methodologies and their limitations, and value systems used in human inquiry" (Academic Senate, 1986, p. 2). The senate recommended that these skills be specifically developed in general education courses, that remedial basic skills be acquired before undertaking baccalaureate-level courses, and that before graduation all students be exposed to non-canonical contributions to civilization. To this end, the senate suggested encouraging students to better and more broadly organize their minor programs by taking advantage of elective courses. In addition, it recommended a reevaluation of major programs that tend to constrain the broadening objectives of a liberal education.

These recommendations implied even more active assessment of State University programs than the review procedures already in place. In 1986, the Chancellor convened a systemwide conference to encourage more active assessment on the campuses and has since supported campus efforts to develop new assessment programs and the creation of systemwide assessment committees to stimulate and coordinate activities. Efforts on the campuses include two pilot projects:

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[1] This description is based on information from Sally Casanova and Frank Young in California Postsecondary Education Commission, March 1987, pp. 95-104.

- "Enhancing Quality by Assessment: A General Education Project," conducted through the English department at California State Polytechnic University, Pomona, seeks to establish instructional objectives for general education courses and criteria, measures for evaluating students in these courses, and guidelines for using results for improvement of instruction and the curriculum.
- "An Empirical Evaluation of Five Baccalaureate Social Science Programs," conducted by the sociology department at California State University, Bakersfield, uses locally developed instruments to assess student learning in upper-division courses required for majors in anthropology, economics, political science, psychology, and sociology and to survey students, graduates, students, faculty, and employers for their perceptions of program quality.

California Community Colleges[2]

The community colleges have probably been undertaking systematic assessment business longer than any other segment, but because of their relative autonomy, quality control is largely the responsibility of each college. Their most comprehensive multi-campus effort to evaluate student learning is the Student Outcomes Study being conducted by the Learning, Assessment, Retention Consortium (LARC), involving 30 California community colleges that pre- and post-test their students in the areas of English writing and reading.

Among individual district projects, the Rancho Santiago Community College District has studied student achievement by measuring retention rates, grade distributions, numbers and kinds of degrees and certificates awarded, employment after graduating from vocational training, success on the General Educational Development Test, scores on pre- and post-tests for remedial or basic skills courses, and numbers and success rates of transfer students at four-year institutions.

Similarly, in evaluating its programs, Santa Barbara City College uses, among other measures, pre- and post-test scores and student satisfaction surveys for remedial programs, evaluations of vocational programs, surveys of non-returning students, grade distributions of students, and assessment of transfer programs that include surveys of transfers to the University of California, Santa Barbara.

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[2] This description is based on information from Robert Turley and John McCuen in California Postsecondary Education Commission, March 1987, pp. 91-94 and 195-113.

Quality Education: A Shared Responsibility

Despite the fact that California's institutions of postsecondary education have well-established procedures for review and improvement of undergraduate education and regularly report on them to their governing boards, the Postsecondary Education Commission, and the Legislature, they have not been impervious to national concerns about the quality of undergraduate life, and the California Legislature has encouraged further review activities on their part. In 1986, it directed the Commission to convene an intersegmental task force to look at the issue of using the state budget to promote quality in higher education; and in 1987, through language in budget appropriations, it directed the University and the State University to present progress reports on their efforts to improve undergraduate education by January 1988 and full reports by January 1989. Late in 1987, it passed Assembly Concurrent Resolution 141 directing the Commission to study the desirability of various funding incentives for improving the quality of undergraduate education, and the Commission has again convened an intersegmental task force to study these issues.

Both the state government and the public as consumers of public higher education have legitimate interests in overseeing the educational enterprise to make sure that institutional missions and state goals are being met (Ewell, 1987). Thus, current legislative and public interest in institutional accountability and assessment is unlikely to abate over the next several years. Their challenge is to expect quality in higher education while providing institutions the flexibility to develop assessment plans and measures that reflect their distinctive missions, goals, and functions. Otherwise, requirements for accountability will lead to spurious, or at least uninformed, interinstitutional comparisons.

Institutions have the responsibility to develop strategies for quality control, ensure that they are implemented on the campus, and respond to requests for accountability. Their challenge is to demonstrate that they are doing a good job and that their own internal procedures are working well, while avoiding unwarranted comparisons among them. To do so, they will have to make more public their own good faith efforts for internal assessment -- their plans and measures, findings, and resulting improvements -- and communicate them in such a way as to reassure the public at large and the Legislature in particular that they are serving the state's interests well and spending the state's funds effectively.

California's segments of public higher education are moving in this direction cooperatively. As an aid to their assessment efforts, the California Postsecondary Education Commission is studying the possibility of an intersegmental student data base that would allow them to track students throughout their academic career, from school through graduate education, for research purposes -- even if students transfer among segments and drop out periodically.

Observers of the national scene with respect to state initiatives in using state budgets to encourage excellence in higher education suggest that if institutions do not respond to public concerns in a timely fashion, state officials are likely to take matters into their own hands and seek to regulate institutions by mandating standardized accountability efforts (Ewell, 1987). This prediction may well hold true for public higher education in California. Once the Commission completes its two current studies of options for state incentive funding to encourage quality in higher education and the possible intersegmental student data base, and reviews the segments' progress reports on their assessment activities, evidence may be available to indicate if California can avoid that unproductive possibility.

Eight Educational Equity

WITH the percentage of California's ethnic and racial minorities increasing dramatically, the issue of equity dominates its educational horizon. Its colleges and universities are faced with the challenge of diversifying their student bodies and faculties to reflect the composition of the state's population while maintaining high standards of quality in student admissions as well as faculty teaching and research. The problem of ensuring full participation in society for an ever-increasing number of minorities is not, of course, simply one of educational preparation. It is a social, economic, and political challenge to the entire state; but the burden of providing social mobility -- particularly for immigrants -- has traditionally fallen on educational institutions.[1]

This chapter first discusses issues of educational opportunity for students and concludes with issues of employment opportunity for faculty and staff.

Educational Equity for Students

California faces dramatically changing demographics. Today's minority groups are projected to constitute 52 percent of the school-age population in the year 2000, making California a "minority majority" state. Display 18 on page 128 graphically compares population projections for that year with 1980 figures. These projections indicate that ethnic minorities will increase their proportion of California's population by between 8 and 12 percent over their 1980 representation. Asian and Hispanic populations will grow most

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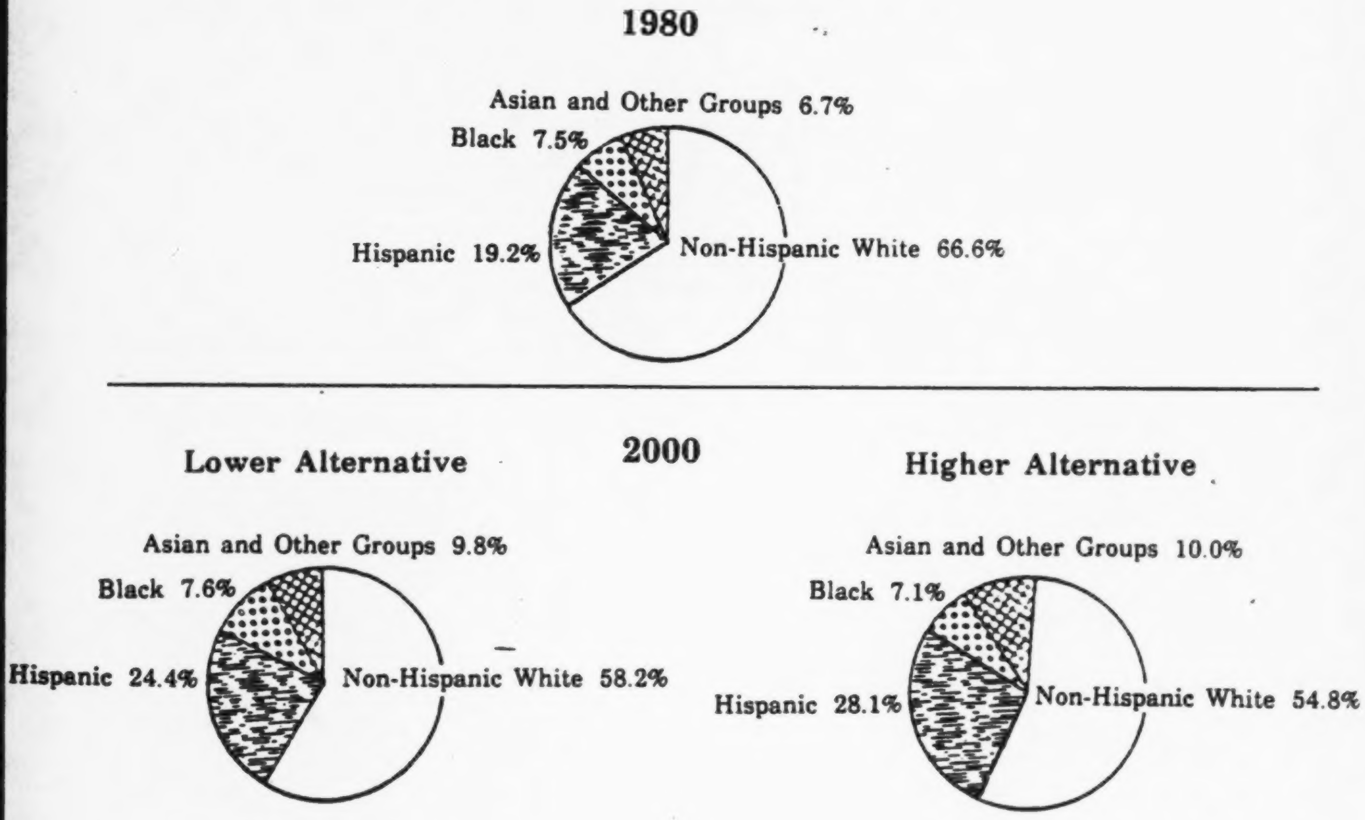
[1] This discussion of educational equity emphasizes opportunities for ethnic minorities rather than for low-income or low socioeconomic-status students because data on the educational achievement of California students is available by ethnicity and not by income or socioeconomic class. National data indicate that college attendance and academic attainment is far more directly related to income or class differences than to ethnicity; yet as is well known, ethnic minorities in America have historically been relegated to low-income occupations and thus to low socioeconomic class status. The complex interrelationship of class and education may be illustrated by recent analyses of improvements in Black Scholastic Aptitude Test scores used for college admissions. Some analysts argue that, because the SAT assesses "logic" that is based on middle class experiences, Black students could begin to test better only when more of them participated in middle-class culture. Between 1977 and 1987, Black SAT scores have begun to rise significantly, if slowly (*New York Times*, September 23, 1987).

DISPLAY 18 California's Population by Ethnicity, 1980 and Projected 2000



Source: Center for Continuing Study of the California Economy, 1982, Table 9, p. 23.

rapidly, but the Black population will increase steadily in comparison to the white population.

While the state's population growth, based on fertility rates and immigration, can be forecast with relative certainty, projections for college-going rates by ethnic group are more problematic, since they must be based not only on projected demographic changes but also changes in students' educational plans, their high school graduation rates, their University and State University eligibility rates, and their enrollment and retention rates.

Earlier chapters have described the eligibility requirements assigned by the Master Plan to the University and State University. Ethnic groups differ considerably in meeting these requirements -- in large part because of differences in completing high school. California's 22 percent drop-out rate for white students during high school can be considered relatively low in comparison to the drop-out rates of at least 33 percent for both Black and Hispanic students and an overwhelming 40 percent for American Indian students.

As Displays 19 and 20 show, more Asian and white high school graduates achieve eligibility than the 12½ and 33⅓ percentages proposed by the Master Plan, while Black and Hispanic graduates are eligible at rates substantially below the stipulated levels. In 1986, half of Asian public high school students were eligible for either the University or the State University -- 33 percent for the University and 50 percent for the State University. White students were eligible at an overall percentage of 16 percent at the University and 47 percent at the State University. Among Black students, in contrast, less than 5 percent qualified for the University and 11 percent qualified for the State University. The Hispanic pool was marginally better, with 5 percent eligible for the University and 13 percent eligible for the State University.

Beyond theoretical eligibility rates, the most discouraging figures are actual participation rates: How many high school graduates actually chose to attend a postsecondary institution? As Display 21 suggests, these participation rates also differ dramatically by ethnic group, with Asian students performing above expectation, white students not far behind, and Black and Hispanic students badly underrepresented.

Low numbers of minority students graduating from high schools, low percentages of them eligible for admission to the State University or the University, and -- most important -- low proportions of them enrolling in the state's higher education system represent a serious state policy issue. In the face of these rates, a clear priority goal must be to transform the system so as to assure considerably higher levels of access.

This was the intention of the 1960 Master Plan, although the definition of access has changed since its origination. From 1960 on, California has sought in higher education to achieve both access and excellence or, to put it differently, quantity and quality. For instance, by stipulating open access to the community colleges, and rigorous standards of admissions to the other two public postsecondary segments, the Master Plan intended to guarantee all state students access to the system while ensuring quality. But facing massive growth in numbers, it proposed that California provide access through a large number of local open-admission institutions situated in, and responsive to, their local communities. These institutions, by and large, were to be community colleges.

Given that the Master Plan directed much of the state's resources to building new community colleges throughout the state to cope with the projected

DISPLAY 19 Eligibility Rates for Freshman Admission to the University of California of 1986 Graduates of California's Public High Schools, by Major Ethnic Group

	Eligibility Pool	Precision Level	Sample Size
Total	14.1%[a]	±0.54%	15,572
Men	13.3	±0.78	7,572
Women	15.1	±0.80	7,998
White	15.8	±0.74	9,119
Hispanic	5.0	±0.72	3,334
Black	4.5	±1.12	1,437
Asian	32.8	±2.58	1,149
Filipino	19.4	±4.71	322

[a] Includes American Indian and Pacific Island graduates, but the small sample sizes for these ethnic groups preclude computation of their eligibility rates.

Note: Final data base validation may result in changes to these estimates in the tenths of units.

Source: Adapted from California Postsecondary Education Commission, March 1988, p. 12.

DISPLAY 20 Eligibility Rates for Freshman Admission to the California State University of 1986 Graduates of California's Public High Schools, by Major Ethnic Group

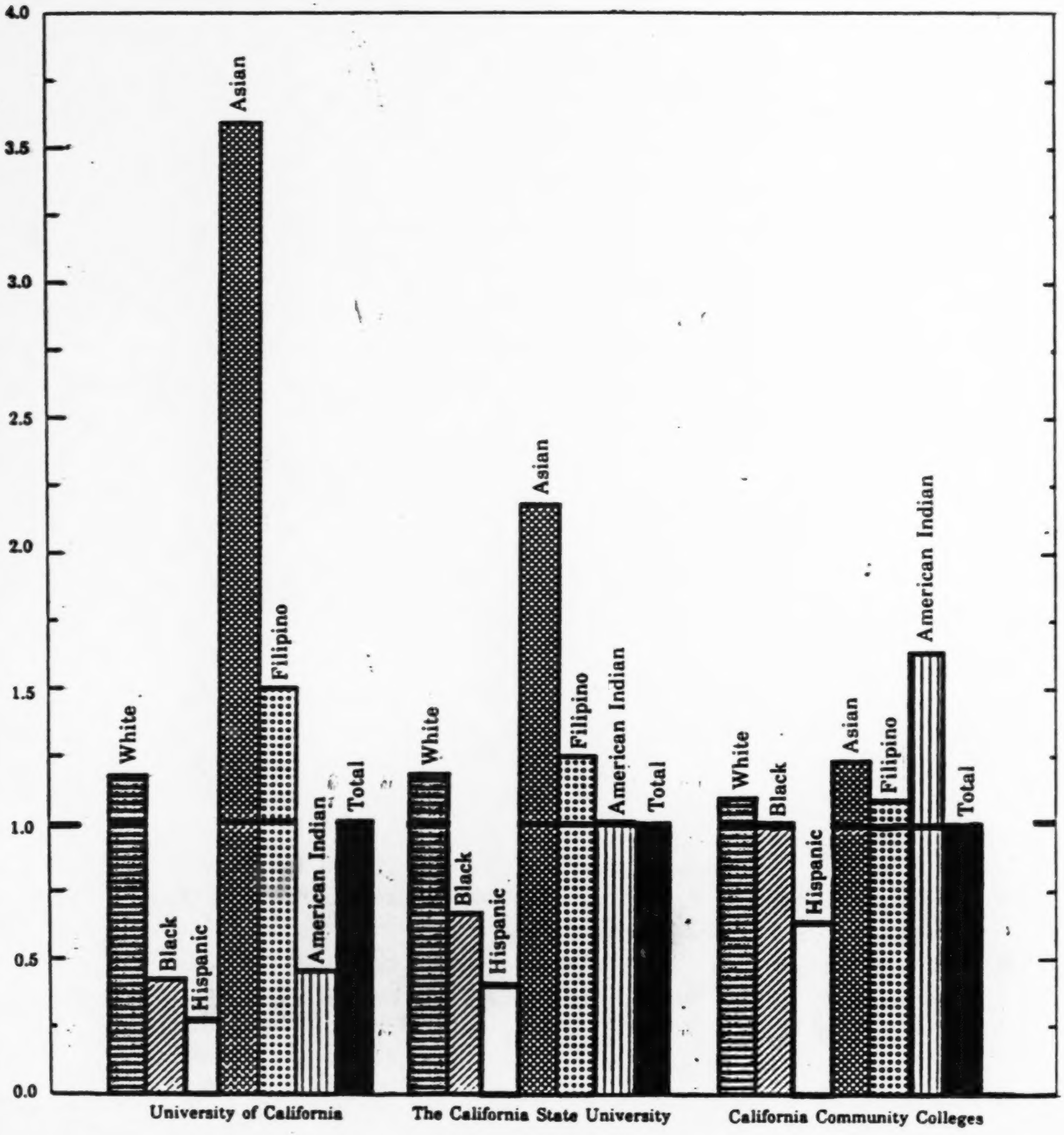
	Eligibility Pool	Precision Level	Sample Size
Total	27.5%[a]	±0.69%	15,576
Men	24.8	±1.00	7,574
Women	30.8	±1.02	8,000
White	31.6	±0.94	9,121
Hispanic	13.3	±1.11	3,335
Black	10.8	±1.52	1,438
Asian	50.0	±2.65	1,149
Filipino	29.5	±5.35	322

[a] Includes American Indian and Pacific Island graduates, but the small sample sizes for these ethnic groups preclude computation of their eligibility rates.

Note: Final data base validation may result in changes to these estimates in the tenths of units.

Source: Adapted from California Postsecondary Education Commission, March 1988, p. 14.

DISPLAY 21 *Participation Rates of 18- to 21-Year Olds in California's Three Segments of Public Higher Education, by Major Ethnic Group, Indexed to the Average Participation Rate*



Source: Pailthorp, 1987, p. 44.

enrollment growth, its authors clearly envisioned the community colleges as key to the higher educational enterprise. Within a decade, the campuses dotted across the state fulfilled this attempt to connect quantity and quality. But the Master Plan Survey Team had focused on *geographical* and *academic* access, while concern for access shifted by the early 1970s to *ethnic* and *economic* opportunity -- led by the Legislature's Joint Committee on the Master Plan. In light of the very few minority and low-income students who qualified for freshman admission directly to the University or the State University, the Committee saw the open admissions policy of the community colleges as a critical avenue through which these students could qualify for baccalaureate-level work by completing their lower-division work with high enough grades to transfer to a four-year institution. The Committee's redefinition of access epitomized the major issue it foresaw for the coming decades. Its orientation has proven correct: If minority participation seemed critical in the 1970s, it has become infinitely more so in the 1980s.

Trends in Equity Programs

California's approaches to equity have changed emphases over the last two decades, even as its demographic pressures have intensified.

Increasing Access Through Special Action Admissions and School Reform

When first raised as an overarching state issue in the 1970s, educational equity led to the establishment of "special action" admissions programs, typically stipulating that a certain percentage of each entering class could be composed of students who did not meet the published admissions criteria, but who gave promise of future attainment. Fueled by changing demographics, concern for the access of underrepresented students shifted the focus of segmental efforts to improving preparation of students in the public schools.

These California efforts coincided with the national movement to reverse what was seen as an "alarming deterioration" in American elementary and secondary schools. Initiated by *A Nation at Risk* -- an "open letter" to the American people (National Commission on Excellence in Education, 1983) -- this movement witnessed production of a number of studies by such other groups as the Education Commission of the States, the National Science Board, the Twentieth Century Fund, the Business-Higher Education Forum, the College Entrance Examination Board, and the Carnegie Foundation for the Advancement of Teaching that together emphasized a number of issues that had contributed to the decline in quality in the nation's schools: a loss of coherence in secondary school curricula; a decline in status for teachers that was reflected in erosion of their salary scales; a lack of rigor and consequent reduction of standards in the schools -- often rationalized as a way to avoid student failure, especially of underrepresented minority students; an inability to monitor and evaluate the schools' efforts of curriculum change and student preparation; and, finally, a lack of federal leadership for the reform movement that, admittedly, had to be accomplished primarily at state and local levels.

Reflecting the fact that much of this work needed to be done at the state level, California launched its own public school reform movement in the same year. This movement has involved contributions by the postsecondary segments that have increased steadily in recent years. Perhaps the greatest change in the state's vision of educational master planning has been the widening perception, by legislators, school officials, postsecondary faculty and administrators, as well as the general public, that postsecondary institutions must play a key role in such reform. For instance, the chairman of the Commission for the Review of the Master Plan, J. Gary Shansby, noted that "early in our deliberations, we concluded that postsecondary education and the public schools are closely interdependent parts of one educational system and that the success of each depends on the other . . . We view postsecondary education as the key to providing better teachers, more useful research, and expanded outreach programs for the improvement of the public schools" (1987, p. i).

Intersegmental Efforts at School Reform: Intersegmental activities grew logically from faculty concern for the preparation of college-bound students. The first of them, "Statements of Competencies" in several basic academic disciplines, are being prepared by faculty representatives from the University, the State University, the community colleges, and the public schools as a continuing project. These faculty members began collaborating in 1981 on statements that outlined expected levels of achievement in English and mathematics for secondary school graduates. Under the aegis of the Academic Senates of the three segments and with the support of the California Education Round Table, faculty are continuing to develop similar documents in other disciplines. These statements are designed to be read by a wide audience of junior and senior high school teachers, administrators, school boards, community groups, counselors, and students. They reflect cooperation between schools and higher education, but they do not infringe on the schools' own responsibilities. That is, they specify only levels of desired competency rather than dictate instructional strategies for attaining these levels. These efforts will benefit all college-bound students, but it is hoped that they will increase the numbers of minority students now eligible for entrance to the University and the State University.

Collaborative Projects in the Disciplines: Each of the segments has fostered projects both under its own aegis and intersegmentally to improve public school preparation. These projects are so extraordinarily broad and numerous that a recent inventory of them was more than 100 pages long. Examples include the California Science Project, Diagnostic Writing Tests, the California Humanities Project, and the California Mathematics Project. A description of one of them -- the California Writing Project -- suggests the nature of all these intersegmental efforts.

The California Writing Project is a collaborative university-school staff development program that involves all segments of higher education with the public and private schools in California. Its goal is to improve student writing in California classrooms by improving the teaching and uses of writing at all grade levels of instruction. Annually, at invitational five-week summer institutes on 17 university campuses, the project works with approximately 450 successful teachers of writing from elementary, secondary, and postsecondary classrooms. During the institutes, these teachers share instructional expertise, discuss relevant current research, and hone their own writing skills. They are then asked to lead workshops during the year in their own institutions or communities, so that other teachers of writing may have a similar, but more limited experience.

The history of the California Writing Project illustrates the pattern by which many other programs have developed. Its parent, the Bay Area Writing Project, was established on the Berkeley campus of the University of California in 1973 to attack a particular problem: Well over 40 percent of the students admitted to Berkeley were having to take the Subject A course designed for those who do not pass an entry-level composition examination. The problem of student writing was beginning to receive national attention; a body of knowledge about writing and teaching of writing was emerging; and particularly noticeable was the fact that most teachers of writing had never been taught to do so.

In designing the Bay Area Writing Project, the University created a model for tapping recognized expertise among outstanding teachers at both high school and higher education levels. In the late 1970s, the success of that project led to a sizable grant from the National Endowment for the Humanities to replicate the model statewide, and the California Writing Project was born. Now, in 1987, 17 university campuses (eight University, eight State University, and one independent) sponsor sites of the project, and California's statewide effort is being replicated in nearly every state in the nation.

Beyond the summer institutes, other activities take place during the academic year. The Bay Area Writing Project site, for instance, directs or engages in activities such as the Subject A program for teachers of college-bound students, where such teachers learn more about the University's expectations for entering students and about identifying strengths and weaknesses in students' writing abilities. University Extension offers courses throughout the year taught by the Bay Area Writing Project participants to develop other teachers' skills at teaching writing. Moreover, project staff and teachers work with the State Department of Education to develop and assist teachers to implement new assessment instruments to measure students' writing abilities.

The success of the California Writing Project has led California's educational leaders to promote development of two similar programs for teachers in other disciplines who wish to develop their expertise. The first of these to be developed was the California Mathematics Project -- to be followed, when state funding is secured by the California Science Project.

Increasing Retention and Graduation Rates

The college experience of students who were granted access but then dropped out made it clear that institutional efforts to ensure success through student support systems of counseling and tutoring were of equal importance with admissions in defining "access." As the State University's 1986 report on educational equity put it, "Most groups . . . agree that the issues of retention and graduation are equally as important as a generalized ability to enroll somewhere" (p. 2). Not surprisingly, resistance to these approaches applied to educational equity revolved around misgivings about the ability of institutions to maintain "quality" or "excellence" while making exceptions to standard operating policies and procedures.

Remediation -- Attacking Underpreparation at the Postsecondary Level: The first activity by faculty and administrators of the postsecondary segments in revising institutional offerings stemmed from the realities of poor student preparation that confronted them in the classroom. The result was a major expansion of remediation for their students. Each of the segments addressed student underpreparation in its own way, but the declining quality of students' academic preparation led all of them to offer courses and services designed to help students attain expected levels of competence that would enable them to complete regular undergraduate courses satisfactorily.

In 1983, the California Postsecondary Education Commission published *Promises to Keep: Remedial Education in California's Public Colleges and Universities* -- the first report to put the issue in an historical perspective and the first comprehensive description of the dimensions of remediation in the three public segments. More recently, the Commission for the Review of the Master Plan addressed the question for the three public segments. In cooperation with the segments, its staff defined remediation and established a taxonomy to delineate four levels of academic preparation in the two key areas of mathematics and English (Display 22). The staff defined student academic preparation as the numbers of school years of training required to bring academic skills up to a segmental faculty's definition of college-level skills. The levels below the non-remedial "university level" range from *pre-college* (that is, in need of spot remediation) to *non-college ready* (that is, in need of high school skills), to *non high-school ready* and *non-life ready* (that is, in need of elementary mathematics and literacy skills). This taxonomy is serving as the starting point for a redefinition of remediation undertaken by a newly-established intersegmental advisory committee of the California Postsecondary Education Commission.

Postsecondary Programs Targeted to Minorities: While remedial efforts ultimately will affect all students in the public schools, many other programs have been targeted particularly to underrepresented minority students. Indeed, the initial impetus for organizing the California Education Round Table was segmental concern at the highest administrative levels for the growing gap between numbers of minority students enrolled in the public schools and those pursuing postsecondary education. A number of very successful efforts to motivate and prepare such minority students for higher education have been mounted in the last few years:

- The MESA program (Mathematics, Engineering, Science Achievement) and MEP (Minority Engineering Program) are designed to help underrepresented minority students enter and complete mathematics and science-based college courses of study. MESA's goals of increasing the numbers of underrepresented minorities in these programs are carried out in high schools and junior high schools, and MEP's are carried out on 17 State University and University of California campuses throughout the state. Established in 1970, MESA is the largest and most successful program of its kind in the nation. More than 90 percent of its high school graduates enroll in college immediately after high school, and 75 percent attend a four year university. MEP's students are twice as likely to complete college as other minority engineering students.

- The Puente project (Spanish for *bridge*) seeks to reduce the community college dropout rate of Mexican American students and to increase their transfer rate to four-year institutions. Trained teams of Mexican-American professionals conduct year-long writing, counseling, and mentoring programs on community college campuses intended to provide students -- over 90 percent of whom are American-born Mexican-Americans and 50 percent of whom are second generation -- with individual, non-traditional

DISPLAY 22 Remediation Taxonomy

Levels of Instruction	Levels of Student	Examples of Courses	
		Math	English
University Level	Students who are college-ready and likely to succeed in the freshman-level courses.	Calculus, Pre-Calculus, Analyt. Geom.	Freshman Composition (Eng. 1A)
Pre-College Level 1*	(A) Students who are college-ready except for minimal specific skill deficiencies that require instruction one level below the Freshman level in English and/or Math.	Adv. Algebra Int. Algebra Trigonometry	Subject A or one course below Fr. Comp. (Eng. 1A)
Pre-College Level 2	(B) Students who are nearly college-ready, but exhibit serious multiple skill deficiencies that require instruction at two levels below the Fr. Level in Eng. and/or Math. (Also, H.S. college-prep students.)	Geometry Elementary Alg.	Courses two levels below Fr. Comp. (Eng. 1A)
High School Diploma	Noncollege-ready in need of high school level skills in various disciplines (i.e., below College Prep. level).	General Math (2 years required courses not specified)	Paragraphs, sentence structure, reading skills at 9-12th-grade level.
Junior High Level	Nonhigh school-ready, in need of jr. high school level skills in various disciplines.	Arithmetic	Basic reading and beginning sentence skills in courses at the 7-9th-grade level.
Elementary Level	Nonhigh school-ready, in need of elementary school level skills in various disciplines.		Above skills but at 6th-grade level and below.
Developmental/Basic Living Skills Level	Students operating below elementary level or who need basic life and coping skills.	Counting	Most basic English vocabulary and speaking skills.

*Courses listed under Pre-College Level 1 may not be considered remedial and are sometimes given degree credit by UC, CSU, and the CCC.

Source: Commission for the Review of the Master Plan for Higher Education, July 1987, p. A5.

counseling and models. Since its 1982 founding of pilot programs, Puente has increased eight-fold the number of transferring students; in 1986-87 it served 450 students.

These programs have proved hearteningly successful, but the number of students they can serve is small. Thus some observers have suggested that a much greater state commitment of resources is needed to achieve educational equity. In the past, their case was difficult to make, given the relatively small changes observed in the participation rates by underrepresented minorities over the last two decades despite quite substantial state investment. More encouraging signs may now be emerging, however, if the most recent national statistics about performances by Black students on college admissions tests may be used as indicators. These suggest, first, that a substantially larger number of students are taking the tests and thus aspiring to college, and, second, that the average scores of Black students are increasing significantly. Nonetheless, as Donald Stewart, the president of the College Board has noted, "at the current rate of increase, it will be 45 years before there is parity of Black and white scores" (*New York Times*, September 23, 1987).

Strengthening the Transfer Function: At the same time that the postsecondary segments have worked to improve minority student preparation for college, they have tried to increase minority student participation throughout the length of postsecondary education -- most recently, by improving connections between community colleges and four-year institutions, as conceived by the Master Plan. Absolutely central to these connections is transfer. Only through the transfer function can the twin goals of access and quality be achieved together, and only if the community colleges successfully prepare students for transfer and four-year institutions cooperate in removing barriers to transfer. Yet this collaboration effort by the segments is absolutely essential if the state's public universities are to equitably maintain highly selective admission standards.

While the community colleges have absorbed other important functions in the years following adoption of the Master Plan (including, particularly, community service and adult literacy programs), their Master Plan role in transfer education has atrophied to a dramatic extent in the last decade (Display 23). In part, this decline stems from the complicated changes that have taken place in community college funding, leading college administrators to concentrate limited resources on course offerings that do not require the high-cost services needed for baccalaureate-bound students.[2] In part it

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[2] As identified by community college administrators, this infrastructure includes a coherent program of counseling, assessment of student preparation, and careful placement of stu-

DISPLAY 23 *Number of Community College Students Who Transferred to the University of California and the California State University, Together with Numbers of First-Time Freshmen in the University, State University, and Community Colleges from California High Schools, 1965 to 1986.*

	Community College Transfer Students			First-Time Freshmen		
	Fall Term		Full Year	Fall Term Only		
Year	University of California	The California State University	California Community Colleges	University of California	The California State University	California Community Colleges
1965	2,948	14,603	--	--	14,023	--
1966	3,761	19,295	--	12,341	15,574	--
1967	3,702	22,059	--	13,072	16,082	--
1968	3,785	26,596	--	11,665	18,844	--
1969	4,458	28,207	43,963	12,066	17,539	--
1970	5,166	29,059	49,245	13,233	18,984	--
1971	6,154	32,546	52,989	13,637	19,306	--
1972	7,165	34,619	53,820	14,358	22,094	--
1973	8,193	33,089	51,335	15,011	22,210	--
1974	7,813	32,646	51,144	14,915	22,886	119,652
1975	8,002	35,537	52,917	15,460	23,239	126,688
1976	7,123	32,653	51,230	14,935	23,498	120,702
1977	6,392	34,001	51,159	14,820	23,867	123,561
1978	6,193	31,609	47,430	15,850	24,668	117,510
1979	5,649	30,428	46,326	16,534	25,703	117,269
1980	5,428	30,490	46,649	16,340	25,470	116,518
1981	4,778	30,026	45,283	16,580	23,500	109,556
1982	5,137	29,824	45,400	16,897	24,016	113,815
1983	5,305	30,274	45,726	18,323	23,250	99,359
1984	5,257	30,134	45,476	19,202	22,959	93,521
1985	4,931	29,682	45,469	19,388	25,106	82,877
1986	4,858	27,761	--	--	--	--

Source: California Postsecondary Education Commission, April 1987, p. 4.

dents in appropriate-level courses. They have called this infrastructure *matriculation* and have sought state funding to support it for several years. When asked by legislators in October 1987 what one thing the state should do for the community colleges to most prepare them for the coming decades, Acting Chancellor John D. Randall identified support of matriculation.

also stems from more aggressive recruitment efforts by the four-year segments to enroll eligible underrepresented minority students directly from high school. A contributing factor, no doubt, has been the perceptions of college-bound students that community colleges no longer provide quality transfer education. A fourth factor, still to be resolved by the state's political leadership, is the instability of the colleges' governance following the passage of Proposition 13.

To reverse this decline in the transfer function will be one of the most important items on the postsecondary educational agenda in the next two decades. All segments and institutions of higher education have recognized the significance of the problem and have pledged to cooperate in reversing the decline.

While the dimensions of the problem are clear, the solution is less obvious. Indeed, the review process over the Master Plan has provided a context for a vigorous debate over possible solutions. The Commission for the Review of the Master Plan advocated one approach -- that of redirecting students to the community colleges from the four-year segments (essentially only from the University, which currently enrolls a higher percentage of lower-division students than does the State University). It noted that the University enrolls a larger proportion of students at the lower-division level than the 40 percent recommended by the Master Plan. It urged, therefore, that more freshman applicants be redirected to the community colleges, which would provide them with a "critical mass" of baccalaureate-bound students, ensure a clientele for the necessary courses, and raise the level of work in these courses as well as secure additional space at the University for transfer students -- space now taken by freshmen.

University officials have argued that this approach begins with several false premises. Since the University establishes separate admissions goals for freshman and transfer students each year, these officials contend that admitted freshmen do not take away places otherwise available for transfers. More important, they point to evidence that the University's applicants would not, under current circumstances, choose to attend community colleges, but would instead go to independent institutions or the State University. Furthermore, denying eligible students a place at the University would fly in the face of historical precedent, as the University has always honored a commitment to finding a place "somewhere in the system" for all students who meet its published admissions criteria.

As an alternative solution to one focused on the 40:60 ratio, the University has advocated an approach emphasizing the respective roles and responsibilities of California higher education. This solution calls on the Legislature to adequately fund community college transfer activities, so that they can afford to assess, counsel, and place students appropriately for transfer; and it calls on the community colleges to make a commitment to offering the two-year curriculum necessary to prepare students for transfer. The University, in return, will make a more comprehensive commitment to transfer, working at the faculty-to-faculty level on curriculum, and streamlining the administrative path for course articulation and transfer into all but the most impacted major programs on its eight general campuses.

A likely approach, then, suggests that efforts to strengthen transfer will concentrate on collaborative efforts between the four-year segments and the community colleges. These efforts will focus on the larger issue of facilitating the movement of students from segment to segment, rather than the subset of the problem represented by the 40:60 ratio. The current focus of efforts at improvement suggest that they will build on faculty-to-faculty interaction, the creation of a common "core curriculum" of general education courses shared by all public segments, and streamlined transfer mechanics, including a larger body of articulation agreements stipulating appropriate courses for transfer, and computerized access to these on community college campuses. While, ultimately, these collaborative efforts may be expressed at the segmental level through cooperation among the systemwide offices of each segment, it is revealing of the structure of California postsecondary education that most current efforts focus instead on regional proximity. That is, particular campuses in the University and the State University have worked out cooperative arrangements with their closest community colleges, concentrating especially on those "feeder" colleges already successful in sending students, or on colleges with sizable populations of underrepresented minority students who should be encouraged to continue at a university campus.

Minority Students and the Independent Sector: One further resource remains that the state may tap to address questions of minority access to quality education: California's "fourth segment" of independent postsecondary education. The family profile of students attending member institutions of the Association of Independent California Colleges and Universities belies the adage that only the rich go to private colleges. Citing the California Student Aid Commission's Student Expense and Resources Survey, the association notes that the average family income of financially dependent students at its member colleges and universities is less than the average for students at the University of California. That is, using 1985 median family incomes as a measure for full-time, financially dependent undergraduates, the Student Aid Commission found that family income for students at independent institutions averaged $39,000, while that for students at the University was $42,000 and that for State University students was $36,000. Furthermore, the association has argued that students enrolled at independent colleges and universities are more likely to be found in the income ranges below

$24,000 and less likely to be found in the income ranges above $60,000 than are University students -- and that they are less likely to be found in the middle-income ranges between $24,000 and $60,000 than either University or State University students.

Beyond their contribution to the state of providing education for families with low incomes, independent institutions have also made explicit commitments to recruit and retain students from the state's minority populations -- especially through the use of minority admissions officers, special "campus days" outreach activities such as Upward Bound and Cal-SOAP, and recruitment at high schools with large minority enrollments. The Association of Independent California Colleges and Universities notes, moreover, that at independent colleges:

> graduation and retention rates for Black and Hispanic students are comparable to the rates for white students. Retention of minority students is aided by strong campus resources and supportive environments. Academic, career, and personal counseling is offered to all students, and many campuses have programs which are professionally staffed to serve the special needs of Blacks, Hispanics, and other underrepresented groups. Great efforts are made to assist students who have financial need. In the academic area, assistance is provided by both peer tutoring and faculty contact. Close contact between faculty and students at the independent schools is made possible by low faculty-student ratios . . . .

While the independent sector carries a substantial portion of the state's four-year higher education workload as measured in terms of total degree production, it does so at minimal cost to state taxpayers. Yet, to a far greater extent than is generally understood, the state by its policies and programs in higher education can either benefit or harm independent institutions and their students, with important positive or negative consequences. Most important of these policies are those relating to student financial aid. A state commitment to increasing the portable aid available to minority students, who may then choose to attend an independent institution, as suggested by the Commission for the Review of the Master Plan, will be an important component in the strategy that must be considered if California is to successfully address its changing demographics by ensuring educational access and success.

Assuring Equity and Excellence for the Future

A new emphasis has emerged recently in discussions about educational opportunity -- one that focuses on ensuring that equity and excellence are pursued simultaneously. The State University, for instance, argues that

> On the one hand, the California State University must embrace the moral and social imperative -- equity; on the other hand, this system must assert academic imperatives associated with selectivity of students and high standards of performance. Because both have value and are critical to the public policy of the State of California, the challenge posed to the university's leadership is reconciliation of these seemingly disparate imperatives (January 1986, pp. 1-2).

A decade of exploration in designing an effective strategy to pursue both excellence and equity has now passed and provides essential experience in dealing with the critical process of diversifying higher education. Given the demographic pressures on the state, however, it is clear that attention must turn from experimentation to active pursuit of effective strategies. These strategies require the successful functioning of a complex set of interrelationships among all educational segments:

- To ensure that adequate numbers of minority students enter the educational "pipeline" leading through higher education, the public schools must prepare more underrepresented minorities to become eligible for admission to the postsecondary segments. (As discussed below, the higher education segments have key roles to play in this process.)

- Admissions procedures for the four-year segments must ensure minority freshmen as well as transfer students access to the systems. Once students have arrived there, the four-year segments must provide hospitable environments, particularly in terms of their curricula and the composition of their faculty (thus providing appropriate role models).

- Particularly for those students not eligible for freshman admission to the University or the State University upon high school graduation and for others choosing to begin their postsecondary education in the community colleges, the transfer function must work well. When this occurs, students move from their lower-division general education preparation at a community college into a four-year institution for the final two years with minimal disruption or delay.

- Finally, the higher cost of the independent institutions must not preclude low-income students, many of whom are minorities, from benefiting from the smaller faculty student ratios and the more elaborate student support services they offer. The state's willingness to provide "portable" student financial aid will enhance student choice and encourage diversity in the system generally.

As the foregoing pages indicate, the increased attention paid intersegmentally and in statewide arenas to public school reform, remediation, transfer, and the health of independent institutions is indicative of a growing concern for intervening at the various critical points along the "pipeline" of educational opportunities that affect minority enrollment -- beginning, probably, in elementary school, concentrating particularly in the ninth and tenth grades, and continuing thereafter into graduate and professional education. Given the importance recognized in the literature of the impact of role models, a significant number of minority faculty must be recruited to make this educational experience meaningful. But this special function cannot be filled by minorities, unless they have been encouraged to excel at each level of education. In this way, student and faculty affirmative action efforts are linked in the state's educational policy goals.

The Faculty Side of Educational Equity

Historical Background

Efforts to change the ethnic and gender composition of faculty and staff in educational institutions began in a self-conscious way in the 1960s, with the enactment of the Federal Equal Pay Act of 1963 -- the first sex discrimination legislation requiring equal pay for equal work. The Federal Civil Rights Act of 1964, as subsequently amended, forbade discrimination in the work place and in federally-assisted education programs. But despite determined efforts, an array of segmental programs have not produced desired results to end discrimination and rectify the effects of past discrimination. Thus while each segment has registered some success in recruiting women and minorities to the faculty, there is a need to accelerate the process. The Commission for the Review of the Master Plan, for instance, urged the support of "responsible governing plans to enhance the quality, diversity, supply, and recruitment of candidates for faculty and administrative positions" since "there will be no change . . . in the absence of a concerted effort to attract larger numbers of women and underrepresented minorities into the pipeline -- now" (July 1987, pp. 20, 22).

What, then, will it take to increase the numbers of women and minority faculty in order to diversify the state's faculty ranks in the future? The challenge goes beyond providing an excellent undergraduate education for all students: It becomes a question of the faculty preparing their own replacements (Justus, Freitag, and Parker, 1987). Those students attracted to academia must (1) be encouraged to attend graduate school with relatively little financial compensation, and (2) be well-trained to conduct high quality scholarship so they will be attractive to hiring departments. This challenge underscores the need for mentoring and sponsoring of students, providing more role models for them, and ensuring that they are well prepared. Clearly, the process of encouraging women and minorities to prepare for academic careers begins with the preparation of more elementary and secondary school and community college students for baccalaureate degrees. All levels of education have responsibility for making sure more women, and especially minority, students graduate from universities to doctoral and postdoctoral programs. Without a growing pool of women and minority graduate students in all academic disciplines, it will be impossible to diversify the faculty while maintaining quality.

Defining the Problem

For postsecondary institutions to serve as hospitable environments for those without a tradition of participation in academic life requires special efforts to integrate minority issues into the curriculum, and to improve the quality of instruction and services for an increasingly diverse student body. This includes not only adapting instruction to address concerns of these students (for instance, by including the contributions of women and various ethnic groups in American history courses), and rendering such interests central to the way particular disciplines are defined and conceptualized. It also means teaching students with very different learning styles.

Moreover, improvement of the quality of education for a diverse student body goes beyond instruction in the classroom. An abundance of anecdotal information and research strongly suggests the importance of role models, mentors, and sponsors. Like white males, minority and women students tend to be more successful academically when they have good examples of people in their field on which to model themselves, and when they have faculty members who take the time to mentor and sponsor them. Women and minority students tend to seek out role models of their gender and ethnicity, as well as receptive faculty mentors and sponsors for advice, encouragement, and assistance in moving into their chosen professions.

Faculty renewal and replacement offers the greatest hope for future incorporation of significant numbers of underrepresented minorities in academia. The best opportunity for accomplishing this first phase is an historic hiring "window of opportunity" that will open over the next 15 years. During this period, a turnover of some 40 percent of current academic positions is expected nationally and in California; this may provide the opportunity to infuse the professoriate with significantly larger numbers of women and minorities.

The scale of opportunities created by this turnover in faculty ranks is suggested by the following statistics:

- The University of California employed 7,412 faculty in October 1984. Cumulative retirement projections at both age 70 and 65 predict between 2,866 and 4,043 vacancies by the year 2004 -- a turnover ranging from 39 percent to 54 percent. Tenured faculty, now a majority (84 percent) of all University faculty, represent 97 percent of total expected retirees. Their ranks will be diminished by from 2,779 to 3,914, or from 45 percent to 63 percent.

- On the 19 campuses of the State University, there were 11,600 tenure-track faculty in Fall 1985. Of these, approximately 8,650, or 73 percent, will leave the system in the next 15 years. Predictions are that hiring levels in the arts, education, and agriculture will change very little during these 15 years, while the humanities, social sciences, engineering, computer science, and business will experience a roller-coaster effect, with a high percentage of new recruitments in the early years and declining numbers later.

- Community college faculty needs in the next 10 to 15 years are not easily estimated. This is so because a high proportion of community college faculty are now part time rather than full-time employees. However, the Commission for the Review of the Master Plan and others believe that the number of full-time faculty should be increased proportionate to part-time, and that future utilization of part-time faculty should see the same standards applied to as are now applied to their full-time colleagues. Moreover, no statewide inventory of likely faculty turnover rates in the community colleges now exists. However, the staff of the Commission for the Review of the Master Plan noted that over 20 percent of their full-time faculty were at retirement age and that nearly 40 percent of the college's administrators were 50 years of age. They concluded that the colleges will therefore need to replace a large number of full-time faculty and administrators in a relatively short period of time.

A survey done by the Office of the President of the University as an aid to estimating the future need for advanced training stated that 44 percent of the community colleges' regular and contract faculty would reach retirement age by the year 2000. Noting that only 8 percent of these were estimated to have doctorates, future replacement needs would be only 550 if this proportion held. It was suggested that the need for faculty with doctorates would likely be greater, as a way of strengthening the transfer function, for example.

The demand side of opportunity does not tell the whole story, however. In order to replenish faculty ranks, there must be a supply pool of candidates for academic careers. What is the supply side of the question with respect to numbers of Black, Hispanic, and Asian candidates for academic careers? The first part of this chapter traced the problem in attracting significantly larger numbers of minority students early into preparing for academic careers. The problem is, of course, even more acute at the graduate and postdoctoral levels.

Projections may be calculated by putting together a number of measurements of the ethnic population. These would include birth rates and immigration, statistics on school retention and graduation, college-going rates, college retention and graduation rates, persistence into graduate and professional education, and completion of advanced degrees. Taken together, however, the picture these present for the future is not encouraging, in terms of either *student* enrollment and retention, or *faculty* hiring and retention. Only through the very greatest vigilance in guiding students into the pipeline, and innovative approaches to increase the numbers currently participating in academia, can this opportunity be seized.

Efforts for Faculty Equity and Excellence

To what extent have the three public segments of higher education been able to provide a more sensitized and diverse faculty for role models for a more diverse student body? While institutional data do not easily lend themselves for comparisons among the three segments, it is clear that over the last decade or more, the numbers of women and minority faculty have increased, yet their proportions have shown only minimal change. Findings of a February 1987 Postsecondary Education Commission report on women and minorities in higher education from 1977 to 1985 included the following:

1. While the numbers of women and minorities have increased, white men still dominate numerically.

2. Both the number and proportion of white women has increased. The greatest increases among tenured faculty for women has been at the University, while the least has been at the State University.

3. The proportion of ethnic minorities on tenured faculties has increased the most at the community colleges and the least at the University. Asian males have achieved the highest proportional increases among minorities in tenured positions.

4. Declines in the proportion of underrepresented minorities among tenure-track faculty greatly outstripped corresponding declines in the numbers

> of tenure-track faculty at all three segments between 1977 and 1985. At the University, the proportion of tenure-track faculty dropped 30 percent overall (or by 455 members); yet underrepresented minority tenure-track faculty decreased 43 percent (or by 63). The overall decline in tenure-track faculty at the State University was 8 percent (or 127 members), as compared to the 41 percent decline among underrepresented minorities at that rank. The decline was most severe at the community colleges, where the proportion of underrepresented minorities dropped 64 percent (or 175) while the overall drop was 47 percent (or 798 faculty members).

In part, at the University this record may be attributed to an aspect of early affirmative action hiring of junior faculty in the 1970s. As with student affirmative action, beginning efforts concentrated on recruitment ("access"), but not on retention ("success"). Many of these faculty members encountered traumatic barriers that prevented them from gaining tenure. These barriers included lack of adequate preparation for sustaining an active research career, heavy competing demands to serve as ethnic or gender role models for students, and calls to act as their constituents' representatives in faculty governance. Those recruiting and supporting such affirmative action faculty now recognize that extra efforts must be made to turn initial hires into tenured faculty.

Other data suggest that women and minorities at the University and the State University are concentrated at the lecturer and instructor ranks and not in tenure-track positions. Moreover, they tend to be concentrated in certain fields, primarily in the social sciences and humanities. At the community colleges, although white women and Asian men and women have made the greatest gains among tenured faculty, on the tenure ladder Black women and Hispanic men have suffered the greatest losses. Currently concentrated at the non-tenure track levels and in particular fields, women and minorities are not likely to move up the academic ladder rapidly in the proportions necessary to reflect the changing demography of the population or the student body. The State University, too, has recognized that "the shortage of Hispanic faculty and administrators is so serious as to constitute an emergency requiring extraordinary action. In 1983, only 3.2 percent of the State University faculty were Hispanic, and many of these were faculty in ethnic studies departments" (June 1985, p. 30). These statistics suggest that there is a great distance yet to go for a diversified faculty at all three segments.

The difficulties are not limited to California's institutions. Statistically the University of California is doing as well or better than its comparison institutions across the country. With respect to representation of minority faculty at all faculty ranks, the University has the highest overall proportion of underrepresented minority faculty of any of these institutions. Rather than finding this situation reassuring, however, the University recognized that it must make unusual efforts in the next two decades, due to the slow rate of progress generally and to the University's need to maintain a competitive edge to attract talented women and minorities into its faculty.

Financial aid, the size of the pool of applicants, and student perceptions of the labor market are important factors affecting graduate and professional school enrollments. Overall, enrollments and degrees awarded in graduate and professional school programs have remained relatively level since the mid-1970s. However, the proportion of advanced degrees awarded to women have increased dramatically in the last few years although it is uneven across disciplines; women tend to enter traditional fields of the humanities, social sciences, and education. These indications suggest that more women can be considered potential candidates for faculty positions -- whereas the pool of minorities for faculty positions remains low. In the former case, then, institutional strategies must concentrate on making women successfully competitive for tenure-track academic positions. In the latter case, more energy must be focused on recruitment.

In both respects, all three segments have been working for some time, individually and in concert, to remedy underrepresentation of women and minority students and the clustering of these groups at lower, untenured ranks. The examples cited below suggest current efforts in each segment to increase the number of women and minorities in underrepresented fields.

University of California: In its role as the primary doctorate-granting public institution in California, the University prepares a large percentage of the new faculty for higher education in California. It consequently has a major responsibility in attracting minority students into graduate study and academic careers. Thus, programs targeted to the preparation of women and minority graduate students constitute an essential part of the University's strategy, which it characterizes as a "pipeline" of affirmative action programs -- a pipeline that links together public school outreach, undergraduate support services and discipline-specific activities, graduate recruitment and support, and efforts to recruit and promote minority faculty. It begins this approach with a variety of financial support programs targeted to critical points in graduate student careers.

At the faculty end of the pipeline similarly, the University has several programs designed to strengthen the skills and competitiveness of potential women and minority faculty:

- The President's Post-Doctoral Fellowship Program brings in women and minority faculty from across the nation to work with the University faculty and increase their scholarship and publications.

- The Targets of Opportunity for Diversity Program awards an additional faculty position to departments who find outstanding minority and women faculty to hire and has done much to increase the numbers of underrepresented academics on University campuses.

- The Pre-Tenure Program, targeted at recently-hired women and minority faculty members, supports release time and research for highly promising assistant professors who need time to produce scholarly work.

The University has been a trend-setter in these areas: All of these programs are now being replicated across the country in comparable institutions. A recent report prepared for the University's Regents, however, argues that more extraordinary measures will be required if the University is to take advantage of the upcoming "window of opportunity" for hiring. It recommends more innovative searches in unusual places for active researchers who can be recruited back into academia and, particularly, a more creative way of defining "excellence" that finds a place for issues important to women and minorities. It also challenges the leadership of each campus -- department chair, dean, and Chancellor's staff -- to hold those whom they supervise accountable for achieving affirmative action goals (Justus, Freitag, and Parker, 1987).

The California State University: The State University also has a number of professional development programs designed to encourage faculty to improve their instruction and curricular offerings. Moreover, it maintains special affirmative action programs to support the retention and promotion of women and minority faculty:

- The Faculty Development Program, for instance, provides support for research and release time to help women and minorites upgrade their scholarly qualifications for tenure;

- The Faculty Development Educational Equity Awards is a successful pilot program to support innovative pedagogy to encourage the academic development of minority and women students.

- The Administrative Fellows Program provides internships in leadership positions for faculty and staff.

Issues for the Future

Progress toward employment equity at the University and State University has been limited, but there are some positive trends. More and more minority students are eligible for the University and State University as first-time freshmen. Increased attempts to attract transfer students from the community colleges as juniors will also undoubtedly raise the numbers of women and minority students. Moreover, efforts to retain talented women and minority junior faculty should also gradually increase their numbers among tenured faculty.

Providing a substantially increased number of minority students can be attracted through the pipeline, the hiring "window of opportunity" holds great promise. One of the key reasons for the discouraging figures over the last decade has been the fact that many women and minorities have been attracted in largest numbers to fields in which relatively little hiring took place. These projections for opportunities to hire new faculty may be much more encouraging. Such opportunities take on an overwhelming importance for California in light of its swiftly emerging demographic changes, and the fact that other universities will be experiencing the same phenomenon (Watkins, 1986). In addition, the lure of high-paying challenging positions in the professions, business, and industry will continue to attract much of the cream of the limited pool of available women and particularly minorities. Thus, for California's public postsecondary educational institutions, competition for the best and brightest of these women and minority scholars is likely to be intense over the next few years. Even beyond the commitment of California's postsecondary segments, however, this is an area where the state needs to make commitment of resources and support for segmental efforts. Otherwise, California will look back in 20 years and realize that practically none of its overwhelming numbers of minority students moved through the window to the world beyond.

Nine California Community Colleges

THE California community colleges are in a sense California's contribution to higher education. These institutions started in California in the early part of the century and then spread throughout the nation. Nowhere have they developed more extensively than in this state. Directly or indirectly, they affect the lives of nearly all Californians. Surveys reveal that about half of all adult Californians attend a community college at some time. Millions of Californians have availed themselves of the variety of services and hundreds of programs offered in the system. In fact, the rate of participation at California community colleges is the highest in the nation and is roughly four times the national average. This widespread participation has resulted from the colleges' variety of offerings and their high level of sensitivity to local needs as a consequence of their broad community base.

Californians attend community colleges to prepare themselves to transfer to upper-division programs in four-year institutions, to learn a skill or trade with employment as their ultimate goal, to retrain after having lost a job, to acquire basic language and mathematics skills, to pursue cultural enrichment, and to explore educational and career goals. No other segment serves so many varied needs as do these colleges. Moreover, the access that the colleges have provided to California's system of higher education has long been seen as the key element in assuring free movement through the system for qualified students.

The 106 colleges in the system are widely dispersed and readily accessible to residents of the metropolitan areas where the bulk of California's population resides, as Displays 4 and 5 on pages 10 and 11 show. Consequently, they are important links to discrete populations with specialized needs, providing citizenship training for immigrants, developmental programs for the substantially handicapped, leisure learning for senior citizens, and classes ranging from health and safety to short-term job preparation, and English as a second language. More than half of the 106 offer bilingual instruction, and all of them have access to grant funds for increasing the supply of bilingual teachers' aides.

Beyond these links to special communities, perhaps the most important link they have forged is in the area of occupational programs. Here they have tended to respond to changing times -- and to evolving local needs -- through emerging fields such as electron microscopy, laser technology, robotics, and biomedical instrumentation. They strive to tailor these offerings to a particular region's labor needs -- for ski patrol technicians in mountain areas, petroleum technicians in oil producing areas, and timber and forest specialists in areas where the lumber industry is economically important. Because the colleges have made great contributions in so many areas to the state and to local communities, it is not surprising that questions about the clarity of their mission arise periodically.

Reconsideration of Purpose and Mission

Programs offered in California's community colleges and in community colleges elsewhere have changed substantially from the focus on two-year transfer education that characterized the early junior colleges. These changes have, in many instances, mirrored changes in society. As a result, community colleges have become the most comprehensive of all postsecondary education institutions.

Yet current debate concerns whether, with limited resources and a declining 18- to 24-year-old age cohort until the late 1990s, community colleges can conduct their full range of programs at an adequate level of quality. And, a parallel question raised by limited resources is whether the colleges can continue to provide access through open admissions and still provide quality programs; i.e., the quality versus equality debate.

A number of recent studies have called for renewed focus on the transfer function and for a revitalization of related academic standards. Others have called for a more "horizontal" focus on the changing needs of the community, by becoming its educational center (Gleazer, 1980) or by establishing stronger alliances with business and industry (Parnell, 1982). Another focus, suggested by Cohen (1980), would have the community college make available a liberal or general education to all its students, emphasizing multidisciplinary courses and curriculum development across departmental lines. The Carnegie Commission has recommended a role for community colleges in providing remedial instruction in order to become "full service institutions for the young" (Cross, 1985). Still others, including Cohen (1981), argue that the community colleges will undergo little qualitative change in their basic mission, but will change their emphasis as educational needs change in different communities.

The Commission for the Review of the Master Plan, in the first phase of its study, focused entirely on the community colleges, and heavily on the two areas of mission and quality. Mission, as used by the Commission, connotes what the colleges could contribute to the individual and society. The Commission concluded that the mission of the segment was to provide access and success in postsecondary education. In sorting out the functions of the colleges (functions being elements which move the institutions toward fulfilling their mission), the Commission concluded that transfer education, education culminating in an associate degree, and vocational education were the central functions of the colleges. All other functions were of lesser importance, but remedial education was deemed to be important because it was essential to provide not only access to but *success* in postsecondary education. (These conclusions were shared by the joint legislative committee reviewing the Master Plan.) The colleges were trying to be too much to too many people, the Commission concluded.

Shifts in Programs and Enrollments

Most of the rapid expansion of California's community colleges in the 1970s was due to the enrollment of part-time students. Some of these students were interested in offerings that were not always a part of the traditional curriculum and which focused on avocational, recreational, and personal interests. The removal of state funding for such courses in 1981, however, has led to a deemphasis of this part of the colleges' curriculum. Another shift in the curriculum, of concern nationwide, has been the increase in vocational and technical enrollments and decrease in work taken by students in the humanities, arts, mathematics, and sciences.

Changes in Program Emphasis

In all, California's community colleges offer over 400 different kinds of academic programs, ranging from computer assisted drafting to English. The statewide distribution of enrollments among major disciplines shifted from general to vocational fields as follows between 1963 and 1982:

	Distribution	
Discipline	1963	1982
Life Sciences	.04	.04
Mathematics, Physics, and Engineering	.16	.13
Social Sciences	.22	.16
Humanities	.25	.21
Physical and Health Education	.05	.05
Occupational Education	.28	.38
Other	--	.03

Source: Chancellor's Office, 1984.

It is estimated that nearly half of community college coursework is in the transferable liberal arts and sciences, one-third involves occupational education, 8 percent is in remedial education, 7 percent is in nontransferable general education (some of which is associate degree applicable), and 5 percent is in community or continuing education (Chancellor's Office, February 1987a):

Course Category	Percent of Student Hours, 1985-86
Liberal Arts and Sciences (BA degree)	46%
Liberal Arts and Sciences (nontransfer)	7
Remedial (short-term and adult education)	8
Community or Continuing Education	5
Occupational Education	33
Unclassified	1

Note: Fee-based courses are excluded.

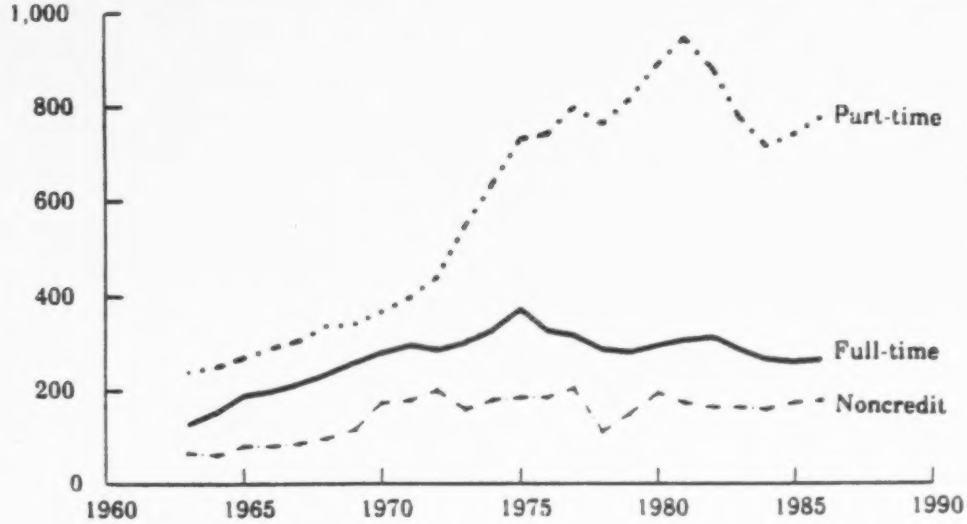
Two-fifths of those courses categorized as being in occupational education transfer to the State University and 14 percent transfer to other institutions, including the University. Altogether, two-thirds of the 73,000 community college courses offered for credit are transferable to a four-year institution.

Changes in Enrollment

California's community colleges are open admission institutions: any adult who can benefit from the instruction or any individual with a high school diploma or equivalent (and some still enrolled in high school) is eligible to attend. And, since community colleges have a very comprehensive postsecondary mission, the demographic characteristics of their students tend to mirror the characteristics of adults in the larger society and mirror the changing social and economic needs of those individuals. How closely the community colleges reflect the larger society is one measure that is often used by some observers to determine how well the colleges are providing equal educational opportunities or access to all Californians. Trends in community college enrollments result from changes in fiscal and academic policies and in the state's demography and economy. When the economy turns down, fewer people work and part-time enrollment increases because individuals turn (or return) to the colleges for occupational training.

After steadily increasing in the 1960s and 1970s, California's community college enrollment increased sharply in 1973 (Display 24). This was due to several factors: (1) the adoption of a fiscal policy that year which encouraged enrollment growth, (2) the economic recession, and (3) continued increases

DISPLAY 24 California Community College Enrollment, 1963 Through 1986, in Thousands



Source: Chancellor's Office, February 1987a.

in the enrollment of veterans returning from Viet Nam. These trends shifted abruptly after 1975. In 1976, for the first time, enrollment of women exceeded that of men. College going declined significantly among men over 24 years of age who returned to work in a rapidly expanding economy. The number of high school graduates started what was to become nearly a decade of decline. This, along with declining numbers of veterans, led to declines in full-time enrollment.

The substantial drop in enrollment in 1978 was due to passage of Proposition 13, which resulted in a 7 percent reduction in college budgets, fewer courses, and reduced student services. Funding was restored in 1979, and the beginning of an economic recession in 1980 led to rapidly expanding enrollments. The colleges recorded their peak enrollment total of 1.43 million students in 1981.

Despite increased demand (in part from immigrants), noncredit enrollment stabilized beginning in 1981 because of a decrease in the fiscal support of these courses. Then, the 1982 reduction in tax support for courses devoted to avocational, recreational, and personal interests, together with level funding (no increase) for other courses in both 1982 and 1983, led to significant reductions in the number of courses and services and, consequently, in enrollment.

Despite budget incentives to grow and efforts to increase enrollment (by adding classes), college enrollment declined again in 1984, this time by 7 percent. Several factors appear to have caused this decrease: a new mandatory student enrollment fee, improved employment, continued decreases in high school graduates, earlier starting academic calendars in seven districts, and a continuation of some factors that led to the 1983 loss.

Fee and other policies were unchanged in 1985. With generally adequate operating budgets, community college enrollments were stable, the number of part-time students increasing slightly and the number of full-time students decreasing. Employment conditions continued to improve, but there is evidence that improved delivery of student financial aid (which reduced the cost of college going for low-income students) had a compensating effect.

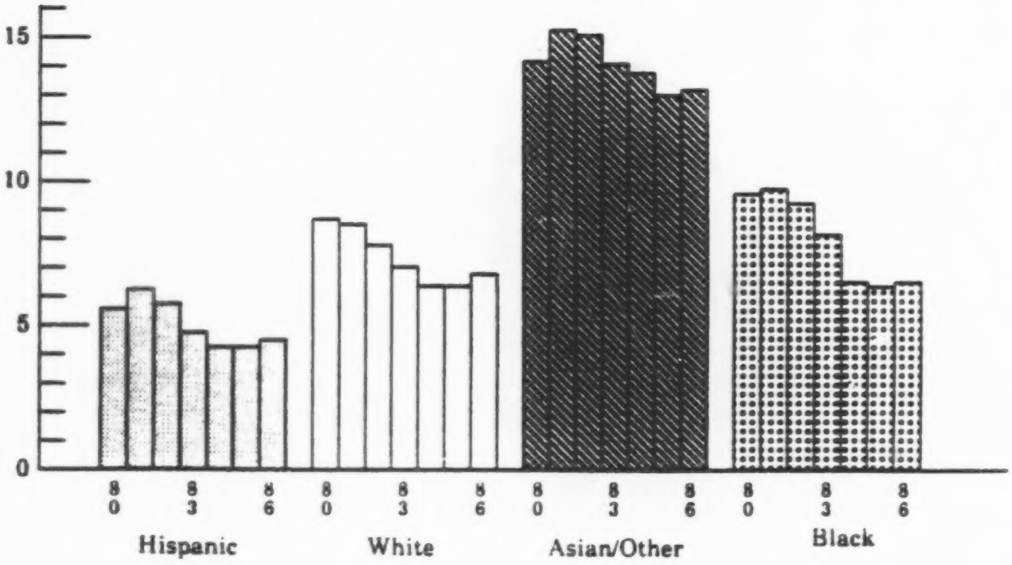
Credit enrollment increased by 4 percent between Fall 1985 and Fall 1986 (the enrollment fee's third year). Full-time enrollment increased (by 1.6 percent) for the first time since 1982 and part-time enrollment increased by 5.3 percent. As usual, there was considerable variation in the enrollment experience of individual districts, three-fourths increasing, while the other one-fourth decreased. Expanded efforts at recruitment, together with more effective delivery of financial aid are felt to have contributed to large enrollment increases in a number of districts. Once again, area variation in unemployment contributed to both increases and decreases in enrollment.

Preliminary data for 1987 indicate that community college enrollment is up by 2 percent. It appears that a third consecutive year of relative stability in college fiscal policy and in the state's economy, together with some added recruiting efforts and continued improvements in student financial aid, have accounted for the increase once again.

While California's population has increased by 12 percent since 1980, community college enrollment has decreased by 11 percent. Whereas the colleges served one in 12 California adults at the beginning of this decade, they now serve one in 17. The largest percentage losses of enrollment during this period have been in agriculture, consumer education, education, architecture, fine and applied arts, psychology, and social science. Less than compensating increases have been recorded in computer science, interdisciplinary studies (including English as a second language), commercial services, and mathematics enrollments.

California's Asian and Hispanic populations have increased dramatically since 1980, but their community college enrollments have not. Consequently, the proportion of Asians attending community colleges, while relatively high, is declining and the historically low proportion of Hispanics who enroll is also declining (Display 25).

DISPLAY 25 *Enrollment in California Community Colleges as Percent of Population by Ethnicity, 1980-1986*



Source: Chancellor's Office, February 1987a.

The largest relative decline in California's community college enrollment during this decade has been among Black students. Their proportion has declined by one-third, much of that in 1984. Community colleges elsewhere in the country also have experienced decreases in Black enrollment, but not to the same degree. This relatively large decrease has not yet been fully explained. Population growth is just one factor. There is some evidence also that, compared to other low-income groups (Asians and Hispanics), Blacks have both a greater need and ability to work, rather than enroll, when college-going costs increase as they recently have (Chancellor's Office, June 1987).

Student Characteristics

With notable exceptions, the characteristics of community college students tend to reflect those of the state's adults generally. This continues to be true despite the fact that participation rates have declined dramatically in recent years.

The racial and ethnic backgrounds of community college students are comparable to those of all Californians, except that Asians are overrepresented and Hispanics are underrepresented:

Ethnic Group	Community College Students (Fall 1985)	All Californians (1985 Estimates)
Asian/Other	16%	8%
Black	7	7
Hispanic	14	21
White	63	64

Source: Chancellor's Office, November 1987.

While the average age of community college students is 27, 45 percent of all students are within the traditional college-going ages of 18- to 24-year olds. At the other extreme, one in ten students are over 50 years old (Chancellor's Ofice, November 1987).

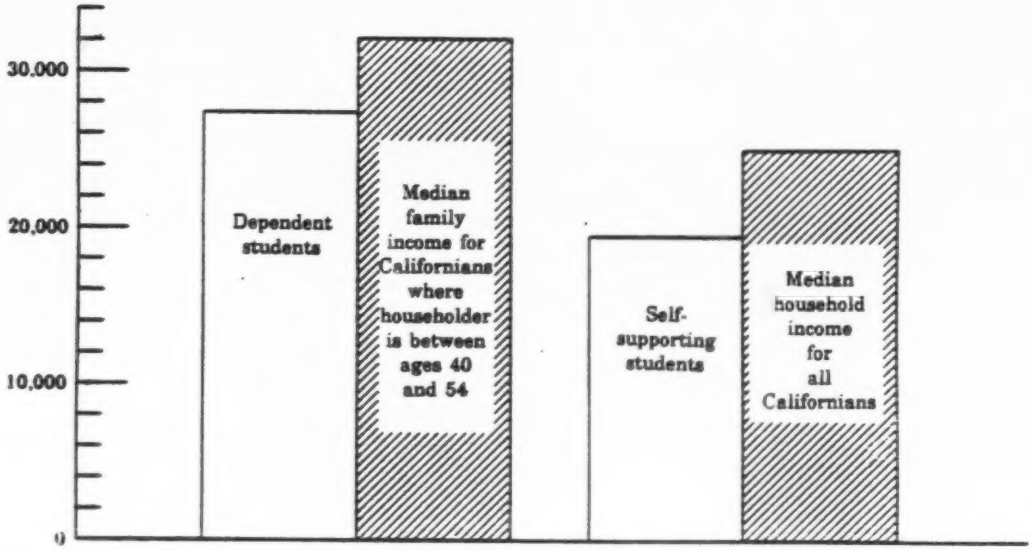
With regard to their economic status, Asian and Black students report the lowest incomes while white students report the highest incomes. Three of every five community college students are self-supporting and the other two are dependent upon their parents for their support (Field Research Corporation, 1986). In either circumstance, community college students report lower average incomes than do Californians in similar circumstances (Display 26). At present, a more wealthy California taxpaying public subsidizes a part of the cost of educating a less wealthy community college student.

Four of every five community college students work regardless of their economic circumstance or attendance pattern. Half of those who work spend 40 hours per week on their job. Only one in ten students receive financial aid grants, while 16 percent of students report they borrow money to support their education.

In terms of student attendance and academic objectives, nearly one-fourth of community college students are enrolled full time; one-third report they intend to transfer to a four-year institution; nearly one-half are enrolled for occupational skills; and the remainder are enrolled for either basic language and computational skills, or for other purposes. Asian students least often attend on a part-time basis; but, along with Hispanics, most often attend noncredit courses. This pattern reflects the large number of noncredit courses in English as a second language.

Overall, enrollments in the community colleges are projected by the State Department of Finance to grow to 1.3 million by 1993 and to 1.5 million by

DISPLAY 26 Annual Income for California Community College Students and All Californians, 1985



Source: Chancellor's Office, November 1987.

the year 2000. The Chancellor's Office believes these projections may be on the conservative side because they incorporate recent participation rates, depressed by the various uncertainties affecting the system. The student body is projected to change considerably in the next decade, and will reflect the growing racial and ethnic diversity variety of the changing California population. Enrollments of women are likely to increase well into the 1990s. Students are expected to increasingly need services to overcome deficiencies in academic skills and preparation. They will be relatively less wealthy and more of them will be self-supporting -- thus leading to a growing need for financial aid.

Faculty and Staff

Recent studies of the community colleges have emphasized the need to upgrade quality generally within the system and particularly with respect to faculty. The Commission for the Review of the Master Plan called for the elimination of the current system of credentialing faculty -- a vestige of the colleges' development from the secondary school system, greater use of peer review in the faculty selection and promotion process, greater controls over the use of part-time faculty, the strengthening of the tenure system, including increasing the probationary period, and strengthening the role of the academic senates in the affairs of the colleges. The Joint Committee for Review of the Master Plan authorized a task force to study these and other personnel policies and to make recommendations for legislative consideration. This group has now recommended the elimination of credentials (a stand taken by virtually every study group) and strengthening tenure along the lines suggested by the Commission. These policies and many others will consequently await further attention from the Governor and the Legislature, who have to date been unable to come to agreement on a wide range of major community college policy issues.

Although staff and faculty selection is largely a matter for the local district and governing board, local control over the process is heavily affected by hundreds of state code sections, among which are many controlling a collective bargaining process for faculty. Under collective bargaining provisions, local academic senates are severely constrained because they can make recommendations to the local administration only in the event this activity does not conflict with collective bargaining agreements. This is in stark contrast to the University of California and the State University, where the roles of the senates are protected in the governance process and vital academic issues are specifically deemed to be outside the scope of bargaining.

In general, a faculty member's status in the colleges falls into one of three categories: (1) permanent faculty who are tenured, (2) probationary faculty who are on a tenure track, and (3) temporary faculty who are in positions that do not lead to tenure. The latter group includes faculty teaching for a limited term, on categorical funding, and those teaching part time (less than full time). Part-time faculty are employed by a short contract with no guarantee of being rehired for the next academic term or year.

Faculty hired for full-time, permanent positions initially serve two years as contract or probationary employees. If rehired for the third year, they then become regular or tenure instructors. If they are not to be rehired for the third year, they must be given notice in March of the second year. Thus, a decision on tenure for a probationary instructor must be made early in the instructor's second year of teaching. The consequence of this policy on tenure is that, at any given time, less than one in ten full-time faculty are on probation (Chancellor's Office, January 1987).

A number of other community college employees need credentials for specific positions such as counseling and some administrative posts. All categories of employees credentialed and non-credentialed (classified), as of 1986, were as follows:

Employee Category	Number	Percent
Full-Time Faculty	15,642	25%
Part-Time Faculty	24,582	39
Full-Time Professional	1,803	3
Full-Time Certificated Administrative	1,675	3
Full-Time Classified Administrative	649	1
Full-Time Classified Non-Administrative	14,393	23
Part-Time Classified	3,357	5
Other	914	1
Total	63,015	

Note: These and other data presented here exclude certain part-time classified staff and students working part time for colleges. This display contains duplicate counts for employees holding more than one assignment.

Source: Chancellor's Office, May 1987.

Over the past decade, the number of full-time faculty has declined in a relatively constant fashion as the result of attrition, while the number of part-time faculty has fluctuated largely because of changes in fiscal policy and in enrollment. Substantial budget cutbacks in the wake of Proposition 13 of 1979 resulted in a substantial reduction in the number of part-time faculty. Restoration of funding then produced increased numbers of part-time faculty for the next three years. This was followed by further budget cuts -- and reduced numbers of part-time faculty in 1982 and 1983, followed again by budget increases and part-time faculty increases in 1984, 1985, and 1986.

Student/faculty ratios reached a low of 23:1 in 1977-78, prior to Proposition 13, and then increased to a high of 31:1 in 1982-83. In 1986-87, the ratio was pegged at 30:1. Nationwide the ratio for community colleges is 19:1, due in large part to the considerably smaller colleges found in other states. California colleges are about twice as large as the national average.

Salaries and fringe benefits for community college staff are determined at the district level, usually through collective bargaining. The statewide average of salaries reported for district and college staff by job type are:

Job Type	1986 Average Salary
Certificated Administrators	$54,452
Classified Administrators	40,228
Full-Time Faculty	38,005
Part-Time Faculty	23,460[a]
Classified Non-Administrators	20,575

[a] Applying hourly rates to academic year class assignment of a full-time faculty member.

Source: Chancellor's Office, May 1987.

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California community college faculty salaries are about four-fifths the rate paid at the University of California, comparable to those paid at the State University, and among the highest paid by community colleges in other states (Chancellor's Office, May 1987; Simpson, 1984; and Berman, Weiler Associates, 1985).

Racial and ethnic minorities make up 15 percent of the faculty, nearly one-fourth of the administrative staff, and one-third of the classified staff:

	Percentage Distribution								
	Faculty			Administrators			Classified		
	1972	1981	1986	1972	1981	1986	1972	1981	1986
Minority	13%	13%	15%	10%	21%	24%	23%	31%	33%
Asian	2	3	3	1	3	4	2	5	5
Black	5	4	5	5	10	11	11	13	11
Hispanic	5	5	5	3	7	9	9	12	14
White	87	87	85	90	79	76	77	69	67

Source: Chancellor's Office, February 1987b.

There has been little change since the early 1970s in the proportion of minority faculty. By contrast, there were major increases in the employment of minority administrators and classified staff during the 1970s. However, gains in the proportion of minorities in these staff categories have been less dramatic during this decade.

Some modest gains in minority employment among full-time faculty are reported for the past four years (Chancellor's Office, January 1987). While the number of full-time faculty decreased between 1981 and 1985, the number of minorities teaching full time increased by over 8 percent. The number of whites teaching full time decreased by 7 percent. However, there was no change in the distribution of whites and minorities among the part-time faculty over the same period.

Data for 1987 from the Chancellor's Office indicate that men comprise 63 percent of full-time faculty, 57 percent of part-time, and 72 percent of certificated administrators. Overall the age of the faculty is increasing. This is the result of the rapid enrollment growth and hiring during the 1960s and early 1970s, together with little net change in staffing since that time. Among full-time faculty, nearly one-half will have reached the (average) retirement age of 62 by the year 2000. (Fully seven in ten will be 55 years old and be eligible to retire at that time.) While part-time faculty are five years younger on average than full-time faculty, many of them who teach year after year also will be retiring. Chancellor's Office data indicate that about

40 percent of the part-time faculty work in one district more or less permanently.

Governance

Because the first "junior colleges" emerged from high schools, the early statutory foundation of governance tied the colleges to the local high school districts and the school law which governed them. In 1907, the Legislature authorized high schools to offer postgraduate courses of study (Chancellor's Office, April 1986). By 1921, it authorized the creation of separate junior colleges in addition to the programs offered by high schools. Junior colleges as separate and distinct entities did not develop fully until after World War II, when the entire state began to experience a population boom. By 1959, 28 of the 56 junior college operations were separate entities. However, their high school connection lingered on in many code sections governing them.

Thus, at the time of the Master Plan, the junior colleges were taking on most of the appearances of institutions of higher education, but they were still firmly and legally part of the public school system. Large areas of the state were not in junior college districts, and were not likely to be incorporated without some encouragement from the state. The colleges were administered by the State Board of Education, which had responsibility for the public school system and the state colleges. Because of this enormous spread of responsibility, it paid little attention to the colleges, and the Legislature tended to legislate directly for the local districts.

With the Master Plan, the colleges were made part of higher education, although they also remained legally part of the public school system in order to receive federal money for vocational education. They were left as locally-based and governed entities but they were drawn more into the state system because of their inclusion in the coordinating agency membership, and because of the very specific provisions relating to transfer. The colleges "remained decentralized in their governance structure; they remained under a board whose primary responsibilities were elementary and secondary education; and they remained under the extensive supervision and control of the Legislature" (Chancellor's Office, April 1986).

Dissatisfaction with the governance arrangements for the rapidly growing colleges continued to develop after the Master Plan. Within the State Department of Education in the mid-1960s, only 13 professionals worked on college affairs. It was this same lack of attention that had led to the creation of the separate state college system in 1960. By 1967, the Legislature created the separate Board of Governors to regulate the community colleges at the state level. The Coordinating Council for Higher Education -- the predecessor of the California Postsecondary Education Commission -- then played an important role in shaping the functions and powers of the Board. As a result, in 1969 the Legislature gave broad responsibilities to the Board, but it unfortunately left intact all existing legislation assigning powers to local boards.

This confusing state of affairs was further complicated by subsequent legislative actions -- a notable example being the passage of collective bargaining legislation -- and by the passage of Proposition 13 in 1978, which left the bulk of college funding to be provided by the state but with governance responsibility lodged at the local level. Since the Legislature acted in 1978 to replace the lost local revenues with state funding for the system, the Legeislature has assumed an unusually interventionist role in college affairs, with some likening the role to that of a super-school board. In the period from 1978 to 1986, "over 1,750 *Education Code* provisions affecting community colleges have been added, amended, and repealed" (Chancellor's Office, April 1986). These layers of specificity, added to years of accretions of highly specific legislation already embedded in the codes, have produced a system governance structure at once inflexible and fragmented, in terms of power and responsibility. Above all, the Board of Governors have been denied the broad policy-making role which other postsecondary boards exercise. In the view of many, the net result has been to weaken the system at the local board level and the state board level.

At the conclusion of its study, the Commission for the Review of the Master Plan recommended the creation of a community college system, administered as a unified state-local system, with the Board of Governors having broad management and policy making powers in financial and academic affairs. Commissioners agreed that the chief executives of the local districts be appointed by the local board but confirmed by the Governors, who would have unprecedented powers to allocate funding to the local districts. Another sweeping recommendation would give the Board the authority to determine the responsibilities of local boards in financial and academic matters. These proposals for a considerably more centralized system have not been endorsed by the Legislature, which has moved more in the direction of keeping the present structure but clarifying the respective mandates. (Appendix A reproduces the recommendations of the Commission.)

Assembly Bill 1725 by Assemblyman Vasconcellos is currently the legislative vehicle for major community college reform efforts. Virtually every aspect of community college affairs receives some attention in the proposed legislation, including the broad areas of finance, governance, and personnel policy. In the governance area a "delineation of functions" is proposed, assigning responsibility to local boards and the Board of Governors. This delineation, endorsed by the Board of Governors, provides for the following:

1. Establishment of a postsecondary education system, consisting of the local boards and the Board of Governors.
2. Assignment to the Board of Governors of these roles: Provision of leadership and direction for the system; setting minimum standards in a variety of areas; evaluation of fiscal and educational effectiveness of the colleges; provision of research and data reporting functions for the system; representation of the system, and advocacy on behalf of the system, as well as preparation and adoption of a systemwide budget, and the determination and allocation of the state's general funding to the colleges and districts (the latter, however, only the extent authorized by law); and review of comprehensive plans for districts, and educational program proposals, as well as facilitation of articulation with other segments.

In addition to these provisions, the legislation provides for policy-making powers of locally elected boards of trustees, and program development to meet community needs. Authority is allocated to local districts to assure staff and program quality, and fiscal responsibility. This allocation of power to local boards is also endorsed by the Board of Governors.

Unfortunately, lacking overall agreement between the legislative and executive branches of government, further progress on the question of governance must await further policy discussions during the Legislature's 1988 session.

Finance

In a recent report on Community College finance, the staff of the California Postsecondary Education Commission (December 1987b) noted that three central themes have dominated the discussions of this question over the last 15 years. These themes remain dilemmas today, and must be addressed if long-term solutions to the finance questions are to be achieved.

- Separation of the colleges from the system of public school finance and governance without ever completely moving the colleges into the arena of State budgeting.
- Controls on course classification and adult non-credit education.

- Questions about the fundamental missions of the colleges and which functions should be fully funded by the state.

While these issues may have remained intractably unchanged, the system of financing for the colleges has changed with bewildering rapidity in recent years, with new plans being put in place by each successive new Legislature. The number of separate plans and variations are far too many to try to deal with in the confines of this report; only the highlights of developments since 1978 are covered here. (For detailed discussion, see California Postsecondary Education Commission, December 1987b, and Commission for the Review of the Master Plan, March 1986.)

At the time that Proposition 13 was passed by the electorate in 1978, funding for the community colleges was a mix of state and local funding, with local property taxes providing the bulk of funding. Proposition 13 sharply curtailed the taxing ability of the local districts. Property taxes were limited to 1 percent of assessed property valuation and the ability to "override" local tax revenue limitations was restricted. Local revenues were reduced by half. Because of the tremendous loss of local tax base and the funding for many local programs, the state had to step in to make up the difference. The state "bailed out" the community colleges and many other local agencies by providing assistance from state General Funds. Thus, funds for the community colleges from the State General Fund went from $473 million in 1977-78, to $795 million in 1978-79, and to $902 million in 1979-80.

In the transition to a post-Proposition 13 world, and before the Legislature acted to regularize the funding, some colleges were forced to cut back on programs and absorb enrollment losses in order to live within reduced funding levels. As a reaction to the growing burden of the new state responsibilities, cost containment on enrollment growth was put in place and enrollment above budgeted levels was not financed. In 1980-81, there was a $50 million budget deficit for the colleges due to unfunded enrollment. In later adjustments, the Legislature eliminated state support for "avocational, recreational, and personal development" courses. In 1983, the Legislature reduced support for community college non-credit enrollment to bring the level of funding more into line with the public schools. In 1983, a new $50 per-semester student fee, or tuition, was instituted. As a result of the fee, or various uncertainties, such as timing and the availability of financial aid, enrollments sagged 11 percent the first year. Enrollments dropped from 1,206,000 in 1981 to 982,000 in 1984.

In recent years, the community college funding mechanism has been criticized by such groups as the California Postsecondary Education Commission, California Business Roundtable, Commission for the Review of the

Master Plan, Joint Committee on the Master Plan, and many others, as well as by the Community College Board of Governors.

The Commission for the Review of the Master Plan has recommended that the statutes on community college finance be replaced by budget instructions from the Board of Governors and Department of Finance and that the Board allocate state support to districts through regulations contained in Title 5 of the Administrative Code (1986). In addition to this major shift of authority from the Legislature to the Board, the Commission recommends a simplified differential funding system, noting specifically the higher than average costs of remediation, adoption of full-time equivalents as an instructional workload measure and other measures for other functions, softening the fiscal impact of enrollment gains and losses, and a mechanism to deal with districts approaching fiscal difficulty.

Like others, the Joint Legislative Committee has faulted the finance mechanism as being too enrollment oriented and not sufficiently cost related. Among other recommendations, the Committee calls for a differential funding mechanism like that recommended by the Board, except that instruction would contain subcategories for lecture versus laboratory instruction and for the use of full-time versus part-time faculty (Joint Committee, 1987). In addition, the Committee recommends use of full-time equivalents, study of a new cost-of-living index, development of a performance incentive (by January 1988), a fund that would augment district budgets by 1 percent to 4 percent -- presumably for improved performance, and further work by a task force on finance.

A task force, authorized by the Legislature, recently completed its work. Among its recommendations is a "program-based" funding model in which:

- Different workload measures and funding standards are proposed for instruction, libraries, student services, maintenance, operation of plant, and institutional support;

- Workload measures (full-time-equivalent students, head-count enrollment, and gross square feet of facilities) are similar to earlier proposals;

- Proposed standards are normative, in the sense that they represent what, the Task Force argues, "ought to be" and are based on (1) one-fourth increase in faculty staffing (from the existing student:faculty ratio of 30:1 to a ratio of 25:1), (2) reducing the use of part-time faculty, and (3) adoption of budget standards used by the American Library Association and the California State University;

- The proportion of these standards to be funded would be determined by annual negotiation;
- Allowable district enrollment growth would be based on changes in unemployment and high school graduates (in addition to the existing provision for adult population); and
- Districts would have to justify cases where their expenditures differed substantially from the proposed standards.

Current Funding

Lacking concrete proposals for a new funding mechanism, the Legislature has extended the current finance mechanism for two more years to 1989. In so doing, the Legislature reiterated its intent to establish a new cost differential funding mechanism which assures access, promotes excellence, and is more reflective of a postsecondary educational system. Also extended by 1987 legislation was the community college enrollment fee and Board of Governors' Financial Aid Program.

In 1984-85, California's community colleges spent $2,850 per average daily attendance for educational and general purposes, termed the "current expense of education." This is an increase of $560 or 30 percent since 1980, but a decrease of $32 (-2 percent) when adjusted for inflation in the cost of doing business: faculty and support staff salaries, equipment, facility, and book prices.

Current funding for California's community colleges is below that of other community colleges across the nation. While the data are not strictly comparable, it does appear that over three-fourths of the community colleges across the country spend more per student for instruction and supporting operations than does the average California community college. A recent survey of community college expenditures in 37 states showed that California's expenditure of $2,160 per average daily attendance in 1984 ranked thirty-third, substantially below the median expenditure of $2,625 (Institute for Higher Education, 1985).

California's lower expenditure pattern for community colleges (compared to the rest of the nation) can be explained largely in terms of the compensating factors of faculty pay and staffing. On the one hand, California full-time faculty are among the most highly paid (of community college faculty) in the country. On the other hand, California uses slightly more part-time faculty (at three-fifths the cost of full timers) than do colleges elsewhere and assigns significantly greater workload to its full-time faculty. Estimates (see National Association of College and University Business Officers, 1986) suggest that the average student:faculty ratio in community colleges nationwide is less than 20:1. The comparable ratio for California is nearly 30:1 -- a workload that is nearly one-third greater than the national average. This difference is attributable primarily to the larger sized classes taught in California because of larger sized colleges, in that California community colleges average twice the size of community colleges elsewhere.

At present, the 70 community college districts report that General Fund operating budgets are just in excess of $2 billion statewide. Their primary revenue sources are:

Source	Percent
State General Fund Apportionment	57%
Categorical Aid	5
Other Aid	1
District Property Taxes	24
Other Local Funds (including Private)	3
Federal Aid	3
Student Charges	7
Total	100%

Source: Chancellor's Office, 1986.

Using a slightly different comparison of revenue sources, and eliminating the federal aid and "other local funds," the state General Fund currently accounts for 64 percent of the revenue colleges receive from state, local taxes, and student enrollment fees. This share is down from the 78 percent figure recorded in 1980, the decrease due to a gradual replacement of state aid by more rapidly increasing revenues from property taxes and student fees.

California's state share of the colleges' operating budgets falls roughly in the middle of shares reported by the seven states with the largest numbers of community colleges. In three of those states (Florida, North Carolina, and Virginia), state appropriations account for three-fourths of colleges' revenue. In Illinois, Michigan, New York, and Pennsylvania, the state share approaches two-fifths.

The flaws in the current system of funding are many. Budgets are exclusively enrollment driven, and do not recognize cost differences only marginally related to enrollment. There is little or no enrollment planning or management under the present system, and local decision making is limited. State control and accountability is also severely limited, a fact not helped by the lack of consensus on state priorities. Recognizing that community college financing, along with other key community college issues will absorb much legislative time in 1988, the California Postsecondary Education Commission has once again embraced a number of principles which should govern any system of funding for the community colleges. (Appendix E contains the complete text of the principles.)

As a measure of the Commission's concern over the imminent need for legislative action to alleviate a number of problems, the Commission has also made reform of the colleges a legislative priority for 1988. Major problems that must be addressed -- according to the Commission -- are inadequate accountability, inappropriate funding, over reliance on part-time faculty, inappropriate mechanisms for selecting and promoting faculty, and lack of clear State priorities. Much of the Commission's work in 1988, and probably 1989, will be directed to finding solutions to these long-standing problems.

Ten An Agenda for Higher Education

THE major issue for California education for the foreseeable future is achieving both equity and excellence. This challenge, which subsumes the issues of access and success, requires diversifying the collegiate student body and professoriate in California's higher education in such a way as to reflect the diversity of the state's population while maintaining high standards of quality in student admissions and faculty teaching and research.

Achieving Equity While Maintaining Excellence

If we do not achieve diversification in the student body and faculty to reflect the changes in California's population, we will continue to move in the direction of a bifurcated society -- one in which a predominantly white, educated "overclass" enjoys a high standard of living in contrast (and perhaps in conflict) with an undereducated and predominantly Hispanic and Black underclass. Such a condition is incompatible with what has been regarded historically as the prerequisite for American democracy: the distribution of wealth across a broad, dominant middle class. Such a condition is also probably incompatible with an economy based on information and technology such as is now emerging in the world -- a change which is in large part spearheaded by California firms. A knowledge-based economy, more than any other, requires a highly educated labor force that competes in the international marketplace on the basis of its ability to solve complicated problems through critical thought and the application of science and technology. Bringing into higher education California's large and growing population of Asian, Black and Hispanic youth is therefore imperative.

Just as it is essential to infuse the academy with those elements of California society who presently are seriously underepresented proportionately to their percentage of the population, it is equally important that this expansion be accomplished without any diminution of present standards for the admission and retention of students and the selection and retention of faculty.

To achieve equity while maintaining excellence will be enormously difficult and costly. One reason why so little progress has been made in the effort up to now is that the challenge has been approached as if it were primarily higher education's problem and that its solution could be achieved through conventional affirmative action programs. Proof that this is not the case can be found in the low college-going and college-graduation rates of Blacks and Hispanics, despite substantial efforts by higher education to raise these rates over the past decade.

Instead, the problem is social, economic, and political in nature, extending from early childhood through the lower grades and high school years into college and graduate school. The systemic and structural character of this problem requires that efforts to solve it be carefully coordinated, involving both separate and collaborative programs in the public schools and in higher education, backed up by solid political and financial commitments on the part of the state's elected officials, policy makers, and the public at large. Anything short of this broad and integrative approach will almost surely fail. Society will blame higher education; higher education will blame lower education and point to a failure of political will; and all the while, the problem in society of insufficient participation of some minorities will persist, and its economic, social, and political consequences will compound.

Cooperation with the Public Schools

In order to achieve the racial and ethnic diversification of higher education and to assure the necessary growth in an internationally-oriented and knowledge-based economy, it will be necessary that higher education and public school leaders redouble their coordinated efforts that have evolved so promisingly in recent years, and accomplish a series of interventions and innovations. Among the most pressing of the actions and initiatives required are the following:

- In the early elementary grades, every effort should be made to identify and provide special support to academically promising children from underrepresented groups. All too often higher education is not seen as an option for students of minority background because of inadequate preparation, limited counseling, and financial obstacles.

- Special counseling of these children and their parents, beginning not later than the seventh grade, should seek to orient the children toward college-preparatory courses beginning in the ninth grade and to inform parents of the aid and supportive services available to develop their child's talent and potential.

- These youngsters should be closely monitored through high school by teachers and counselors specially trained to provide academic support, encouragement, and orientation for college going; and their parents should receive related counseling and advisement.

Faculty Replacement

By the year 2000, California will need to replace at least one-third of its higher education faculty. The sheer size of this task will constitute a massive challenge to colleges and universities seeking to maintain and enhance instructional excellence. At least in theory the need to replace a major proportion of the professoriate constitutes an extraordinary chance, a true "window of opportunity," to recruit minority students -- especially Blacks and Hispanics -- into the professoriate and to have a major impact on the ethnic and racial imbalance in the profession. However, a close reading of the data on preparation of minority students and their persistence and retention rates in schools and colleges suggest that, without radical changes and new interventions, the percentage of Blacks and Hispanics in the professoriate in the years 2000 or 2010 will constitute only a marginal improvement over the present percentage. In short, the "window" will remain closed unless we take immediate steps to open it wide to minority candidates. Among the actions needed are:

- Professors and other academic personnel who are trained to provide a sustaining environment should closely mentor underrepresented college students beginning in the freshman year. The Puente Project described in Chapter Eight could serve as an archetype for this program.
- The high school-undergraduate mentoring program advocated on the previous page should be replicated at the graduate school level, and costs of graduate education for qualified needy students preparing for college teaching should be fully underwritten.

Teacher Education

Just as higher education must replace a major proportion of its professoriate, colleges and universities must actively recruit and train large numbers of minority and other students as public school teachers. By the year 2000, California public schools will need at least 90,000 new teachers. This is obviously a tremendous task, but it is made greater by the clear need to train substantial numbers of underrepresented minority teachers. California needs teachers and principals who by providing convincing role models can make an impact on the retention and preparation problems so prevalent among minority students. Sensitive teachers -- particularly in the early grades -- are critical to the improvement of instructional techniques and to the development of students who aspire to and are prepared for college-level study. To this end:

- Teacher training programs should seek to sensitize all candidate teachers to these special needs.
- Funds are needed to further institutional programs to encourage and assist minority students to enter the teaching profession.
- Colleges and universities must intensify research into teaching and the learning process so that models for success can be identified, particularly as they relate to learning in mulitcultural settings.
- A parallel effort should be made to explore more systematically the uses of educational technology in these settings.

Student Financial Aid

The rising costs of college have obvious implications for most students and potential students in higher education, but they raise particular concerns among underrepresented students and their parents about their ability to pay for their education. Moreover, the continuing trend toward loans rather than grants has serious implications for students, who must start their working careers with large debts, and for the society when student career decisions are influenced by the deleterious effects of indebtedness. Therefore:

- The relationship between loans and grants, scholarships, work, and forgiveness provisions (such as public service) needs to receive considerable attention in the future.
- The state should guarantee, as recommended by the Master Plan Commission, but not yet policy, that the costs of the college education of all academically qualified, financially needy students will be met.
- This state commitment should then be widely disseminated to late elementary and junior high school children and their parents.

The Community Colleges

Since the adoption of the 1960 Master Plan, the community colleges have operated at the very heart of the California system of higher education. They have been the first point of entry in the public system for most Californians, among them a growing number of ethnic minorities and women. Because these colleges are the key to the total higher education system, the system falters when they do not function well. Although historically they have been highly successful in providing wide access, in recent years disturbing signs of instability have been evident within the community college system in terms of financing, enrollments, and governance. The colleges have gone through a protracted period of change. They have been the focus of study and review. These events have lead to a careful scrutiny of their mission, the appropriate roles of the Board of Governors and local boards, the priorities of the state, and the effectiveness of the colleges in providing the degree of access historically expected of them. Yet little real change has resulted to date from the controversy of recent years.

It is imperative that stable financing and more clearly articulated governance of the community colleges be assured so that their energies can be directed to the educational issues linked to equity and excellence. All segments should work with the community colleges to make the transfer function a more effective vehicle for access, and assist all efforts to strengthen the colleges, including the removal of barriers to transfer. A goal of the state should be the full restoration of the community college system in a way that assures the colleges will offer a fully persuasive alternative for lower-division study.

Economic Development

In the closing years of the twentieth century, an excellent system of higher education is a necessity that contributes exponentially to building the economy and assuring a high standard of living. As the Legislature's Joint Committee on Science and Technology stated in 1986, "Universities and colleges are an important part of the solution to the competitiveness challenge as advanced technology and a skilled workforce are key elements of any competitiveness strategy." Thus graduate education, with adequate facilities for research and study, must be a preeminent priority on the State's agenda. But all institutions can contribute effectively to local, regional and state development strategies. Institutions need to establish effective links with the business community and to provide educationally sound program support whenever possible. Educational technology applied to the educational needs of business may give the colleges and universities new tools to cater to emerging needs. The goal should be a partnership based on mutual respect with appropriate recognition of the many roles of higher education, including the need to assure excellence and equity. Above all, the goals of excellence and equity must not be seen as antithetical to competitiveness but as being complementary to it.

Without such a commitment to excellence and equity, as the core of California's agenda for higher education from now until the year 2000, California cannot build the society it will need in the new century. The failure to achieve these goals in an interdependent, highly competitive international environment will diminish its standard of living, enfeeble its economy, and impoverish the lives of all Californians.

An overarching imperative that should motivate all these efforts must be the continued provision of education at a very high level of quality. Recent reforms such as these to address deficiencies in curriculum, should be pursued vigorously, and efforts redoubled to address the retention, achievement, and performance of students in the system. It surely must be clear that failure to provide the widest possible measure of access is tantamount to abandoning the touchstone of public postsecondary education. On the other hand, to provide wide access to a higher education system of mediocre quality would be to perpetrate a hoax on California's citizens.

California now has an economy that would rank as the sixth largest among the nations of the world. It has been forecast to the fifth largest economy by the year 2000, when one-quarter of the state's output will be directly related to foreign trade. We cannot say with precision what the job market will look like at the turn of the century, but we can say with considerable confidence that the economy then will require citizens trained flexibly at high levels of skill. As we make the transition to that new economy, we will need to establish the primacy of education in the goals of the state. To achieve both equity and excellence in California, the importance of education must be realized in concrete terms -- for example, by according high social and economic status to students and teachers who excel. The achievement of these goals will require far more that the efforts of postsecondary education alone; political and business leaders must be deeply involved in this commitment. It will be a costly venture, but the alternative is failure at incalculable cost to all levels of California society and to the nation. California has made historic commitments to quality, mass education in this century, with success that has not gone unnoticed in other states in this nation. Once again, Californians must be called on to make substantial investments in the future, mindful of the fact that the sacrifices and commitments of two and three decades ago have proven to be the priceless assets of today's society and economy.

Appendix A Master Plan Recommendations

Note: The following recommendations are reproduced from *The Master Plan Renewed: Unity, Equity, Quality, and Efficiency in California Postsecondary Education* -- the final report of the Commission for the Review of the Master Plan for Higher Education (July 1987). The cost estimates attached to some of the recommendations are reproduced from Appendix C of that report.

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1. The California Education Round Table shall be recognized as the body responsible for providing the necessary operational linkage for the state's educational system. Among the most pressing matters that must be addressed by this body are:

- Establishing an agenda for practical and broad-based research into methods of improving instruction and reducing the dropout rate in the elementary and secondary schools;
- Overseeing formal consultation among the segments regarding changes in admissions requirements and establishing an articulation mechanism to eliminate obstacles to student progress through the system;
- Overseeing intersegmental programs established to foster equity throughout the educational enterprise;
- Assuring support for coordinated outreach programs in the public schools;
- Assuring support for cooperative curriculum development programs involving elementary and secondary school teachers and college and university faculties;
- Overseeing statewide, coordinated development and application of new information technology networks to meet instructional and other needs within and among the public and private sectors; and
- Creating and overseeing an Intersegmental Degree Programs Board to guide studies of the need for and expanded development of intersegmental degree programs.

The Director of the California Postsecondary Education Commission shall sit ex officio, without vote. The California Postsecondary Education Commission shall report biennially to the Governor, the Legislature, and the segments on the effectiveness of the Round Table in performing its tasks.

Cost: Possible future costs of $0.5 million annually for staff support for the Round Table (the Intersegmental Coordinating Council).

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2. The missions of the public and accredited private segments shall be as follows:

   - The public and private elementary and secondary schools shall be responsible for academic and general vocational instruction through the 12th grade, including preparation for postsecondary instruction and general and academic preparation for their students' future participation in the labor market, and such adult instruction as the state is resolved to support.
   - The California Community Colleges shall offer academic and vocational instruction at the lower-division level for the great majority of "college-age" and older students. In addition, they shall provide remedial instruction for students inadequately prepared for postsecondary education, state-supported noncredit instruction as deemed appropriate by the Board of Governors, and fee-supported community service instruction. The Community Colleges shall have principal but not exclusive responsibility for vocational education.
   - The California State University shall offer undergraduate and graduate instruction through the master's degree in the liberal arts and sciences and professional education, including teacher education, through the master's degree. The doctoral degree may be awarded jointly with the University of California or with a private institution of postsecondary education, provided it is approved by the California Postsecondary Education Commission. (Joint doctoral programs may be recommended by the Intersegmental Degree Programs Board, as well as by the individual segments.) Research, scholarship, and creative activity in support of its undergraduate and graduate instructional mission is authorized in the California State University and shall be supported by the state. The California State University shall have a particular responsibility among the public institutions for research in elementary and secondary instruction and for conducting research related to the instructional use of new technology; the state shall also support these research responsibilities.
   - The University of California shall offer undergraduate instruction and graduate instruction and professional education through the doctoral degree. It shall have exclusive jurisdiction in public higher education over instruction in the profession of law and over graduate instruction in the professions of medicine, dentistry, and veterinary medicine. It shall have sole authority among the public segments to award the doctoral degree in

all fields of learning, except that it may agree with the California State University to award joint doctoral degrees subject to approval of the California Postsecondary Education Commission. The University of California shall be the primary state-supported academic agency for research.

- The independent, accredited degree-granting colleges, universities, and professional schools shall provide undergraduate and graduate instruction and research in accordance with their missions.
- The private, accredited occupational schools shall provide vocational instruction according to established accreditation standards.
- All segments of education are responsible for ensuring that students who are willing and able to prepare themselves for advancement through the system have full and equal opportunity to do so. All three public postsecondary segments may determine that it is necessary to provide remedial instruction, but the public schools have primary responsibility through their regular programs and adult schools for preparing students for postsecondary work.

Cost: $14.5 million of state support for State University research.

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3. The admission policy of each of the public segments shall be as follows:

- The California Community Colleges shall remain open to all high school graduates and others at least 18 years of age capable of profiting from the instruction offered. It shall be the basic policy of the state that all Community College students shall have access to the Community College of their choice without regard to district boundaries.
- The California State University shall select first-time freshmen from those who rank among the top one-third of all California public high school graduates, with graduates of private and out-of-state secondary schools held to at least equivalent levels.
- The University of California shall select first-time freshmen from those who rank among the top one-eighth of all California public high school graduates, with graduates of private and out-of-state secondary schools held to at least equivalent levels.
- Both four-year segments shall maintain lower-division enrollment systemwide at no more than 40 percent of total undergraduate enrollment. The means of achieving this goal is left to each segment to determine. In determining eligibility and selection, both segments shall consider criteria and procedures that recognize skills, talents, knowledge, and the potential for success and shall advise prospective applicants and school counse-

lors of those criteria. Both segments shall continue to use special admissions involving exceptions to these rules to increase the participation rates of underrepresented groups.

- The Board of Governors of the California Community Colleges shall continue to implement the minimum skill level requirements and mandatory assessment, counseling, placement, and follow-up programs recommended by this Commission. All three public segments shall proceed with the development of the intersegmental transfer core curriculum.
- The California State University shall maintain its lower-division enrollment at or below 40 percent of its undergraduate enrollment systemwide, and its planning documents shall reflect this policy.
- Beginning in the academic year 1989-90, the University of California shall reduce the percentage that lower-division enrollment systemwide is of total undergraduate enrollment by one percentage point each year through the academic year 1994-95. University enrollment planning documents, effective 1987-88, shall reflect this change and the goal of achieving a lower-division enrollment, systemwide, of no more than 40 percent of total undergraduate enrollment by 1995-96 and maintaining that level thereafter.

Cost: Indeterminable, but expected long-term savings if lower division enrollment growth occurs in Community Colleges rather than at the University of California.

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4. The transfer function shall be recognized by the Governor, Legislature, and governing boards as a central institutional priority of all three public segments of postsecondary education:

- The state shall guarantee by statute a place in postsecondary education for all qualified California students who wish to attend. Students who are eligible to enter the University of California or the California State University directly out of high school, but who attend a Community College, and all others who succeed in the transfer curriculum at the Community College level, shall be guaranteed future enrollment as upper-division students at the University of California or the California State University. The grade point average required of all such transfer students shall be the same within each segment regardless of their original eligibility, and all such transfer students shall be treated equally with continuing students for admission to the programs of their choice.
- Students who are eligible for admission to the University of California or to the California State University as first-time freshmen, but who elect to

attend a Community College and who complete the required number of units, including the intersegmentally developed transfer core curriculum, with the requisite grade point average, shall be admitted to the University of California campus or to the California State University campus of their choice, depending upon their original eligibility, subject to the planned enrollment composition and growth for each campus.

- The University of California and the California State University shall require students who are not regularly eligible for admission as freshmen (other than those admitted under special provisions) to complete the intersegmentally developed transfer core curriculum at a Community College. Those who complete the required courses with the requisite grade point average shall then be assured access to the California State University system or the University of California system as transfer students with full degree credit for that coursework.
- The Board of Governors of the California Community Colleges shall have the authority and responsibility to guarantee that all Community College students have access to courses that meet the lower-division baccalaureate degree requirements of California public universities. The Board, with the cooperation of the University of California Regents and the California State University Trustees, shall make sure that students are clearly and fully informed as to which Community College courses and units are transferable and that requirements in the Community Colleges correspond to the requirements for, entry to, and success in, upper-division coursework.
- The governing boards of the University of California, the California State University, the California Community Colleges, and the Association of Independent California Colleges and Universities and the State Board of Education shall be accountable for the implementation of formal systemwide articulation agreements and comparable course numbering systems within and among the segments as developed through the articulation mechanism to be established by the California Education Round Table.
- The Governor and Legislature shall provide the financial support necessary for the Community Colleges to offer comprehensive transfer programs and supporting services essential to an effective transfer function.

The California Postsecondary Education Commission shall advise the Governor and Legislature annually as to the adequacy of state support in this regard and as to compliance with these recommendations regarding both admissions and transfer on the part of all three public segments of postsecondary education.

The chairs of the governing boards of the California State University, the University of California, and the California Community College system shall present yearly reports to the Legislature on the status of transfer policies and rates and outstanding problems of intersegmental articulation and coordination.

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5. The Governor and Legislature shall create the California Community College system to be administered as a unified state-local system by the Board of Governors with broad policy-making and management responsibilities in both academic and financial matters. The Community Colleges shall be acknowledged to be postsecondary institutions and not part of the public school system.

   Cost: $1.5 million annually for increased responsibilities to the Board of Governors.

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6. All three governing boards shall delegate appropriate authority to faculty senates with respect to academic standards; curriculum; policies for hiring, evaluation, and retention of faculty; and other academic matters. Students in all three public segments shall participate in appropriate aspects of campus and segmental governance. Regardless of the extent to which they delegate authority to administrators and the faculties, however, the governing boards shall be accountable for achieving and maintaining equity, quality, and efficiency in the operation of their institutions.

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7. Educational equity must have the commitment of the Governor, Legislature, the segmental governing boards, and the California Education Round Table and be a principal element in every aspect of institutional operations:

   - The governing boards must exercise continuing oversight of their institutions' effectiveness in achieving educational equity. They must hold faculty and administrators accountable for the success of each institution in achieving equity, and themselves accept accountability to the people of the state. They must regularly assess and evaluate institutional progress toward equity, requesting reports by campus that rate (1) diversification of the undergraduate and graduate student bodies, (2) retention rates, with emphasis on underrepresented and special-action students, (3) faculty diversification, and (4) outreach efforts. They shall regularly report to the Governor and Legislature on progress made toward achieving educational equity.

- The Governor and Legislature should develop and fund positive performance driven incentives to encourage improvement in each of the four areas listed above and require regular reports from the segmental governing boards on their progress in achieving educational equity.

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8. The Governor and Legislature shall support responsible governing board plans to enhance the quality, diversity, supply, and recruitment of candidates for faculty and administrative positions:

   - The Regents of the University of California, the Trustees of the California State University, and the Board of Governors of the California Community Colleges shall establish and the Governor and Legislature fund a statewide program for the early identification, recruitment, and training of minority and women undergraduate, graduate, and postgraduate students for faculty and academic administrative positions. Additionally, the Regents of the University of California and the Board of Trustees of the California State University shall establish and maintain a program for articulation between California State University undergraduate and master's programs and UC doctoral and professional programs for the purpose of recruiting underrepresented minorities and women to advanced study. The independent institutions should be encouraged to participate in all of these endeavors.
   - The Governor and Legislature shall increase support for graduate student financial aid for all programs, with the particular objective of increasing the number of female and underrepresented minority students in the public and independent universities who are preparing to become college and university teachers.

   The California Postsecondary Education Commission shall submit to the Legislature an annual report on the status of faculty and staff diversification in the public institutions. The report shall include information by campus and, where necessary, by department. Particular attention shall be given to those programs that evidence special success or failure in recruiting and retaining women and underrepresented minority faculty.

   Cost: $7.1 million annually for the program of early identification and recruitment of faculty ($0.5 million annually for staff in the public segments, plus $5.8 million for 140 new faculty appointments in the two public university systems), and $3.1 million annually to double the size of the existing graduate fellowship program.

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9. The Governor and Legislature shall guarantee student financial aid in a manner which optimizes student choice:

- The Governor and Legislature shall guarantee by statute that all needy students who perform well, as evidenced by being regularly admissible to the University of California or the California State University, will be provided adequate financial support to attend an accredited California institution of their choice, based on uniform estimates of need.
- The Governor and Legislature shall adjust support for undergraduate student financial aid so that the number of awards keeps pace with enrollment growth. The maximum award amount shall be raised and maintained at the equivalent of the average full operating cost per student for the California State University and the University of California.
- The Governor and Legislature shall seek to fund approximate equality in grant and loan aid to stem the problem of overreliance on loans. In addition, state support for student employment both on campus and off campus shall be provided to supplement grants and loans, and loan recipients shall have an opportunity to repay their loans through public service employment following completion of their studies.

The California Student Aid Commission shall regularly report to the Governor and Legislature on the effectiveness of these recommendations in accomplishing state policy.

Cost: $12 million annually to guarantee aid, assuming such guarantees result in enrollment increases of 500 students in UC and 1,500 students in CSU; $34 million annually to increase the maximum Cal Grant award to the average cost for UC and CSU; and $56 million to balance loans and grants.

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10. The California State University shall have responsibility for meeting the needs of older, part-time students who desire to pursue the baccalaureate degree. The University of California, however, shall seek to accommodate those students whose aspirations lead them to that institution. The role and mission statements of both segments must contain a specific commitment to integrating such students who are eligible to matriculate into academic degree programs. The Regents and the Trustees shall make whatever specific organizational changes are necessary to carry out that commitment, and shall review and where necessary adapt admissions standards for older students to account for the skills and experience that are a better measure of potential success than are out-of-date high school records.

The Governor and Legislature shall further express the state's commitment to equity for older, part-time students by funding at the University of California and the California State University all courses and programs leading to degrees for matriculated students, whether on campus or off campus.

Cost: $24.1 million to increase state support for all CSU and UC matriculated enrollment in courses leading to a degree.

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11. The governing boards of the three public segments must be held accountable for the retention rates among students admitted to their institutions. The Board of Trustees of the California State University and the Regents of the University of California shall seek to achieve and maintain systemwide graduation rates that are at least equal to or above the national averages for similar institutions with comparable admission requirements. By 1995, the University of California and the California State University should improve their retention rates of special-action admittees to at least two-thirds of those of the regularly admitted student body.

The segments may offer remedial courses, but only if such courses are based on careful student assessment, counseling, placement, and follow-up to improve the retention and success of underprepared students -- particularly those admitted by special action. The California Community Colleges shall limit the number of units of remedial coursework a student may take -- with exemptions or waivers possible in certain cases -- directing students needing additional work to the adult basic education programs. The University of California and the California State University shall establish and maintain clearly defined academic floors below which they shall not offer remedial courses and they shall eventually phase-out remedial instruction, other than that required for reentry students, as preparation of students by the public schools improves. Remedial courses shall be state-funded and shall carry workload credit, but may not be credited toward the baccalaureate.

The California Postsecondary Education Commission shall establish a Task Force on English as a Second Language to study, evaluate, and make recommendations to the segments regarding the development of effective ESL programs, and the three public segments shall assure the effective articulation, coordination, and quality of English as a Second Language programs.

Cost: For improved retention of students at CSU, each 1 percent overall improvement costs $9 million, while each 1 percent improvement in retention for special action admits in the two public universities costs $2.8 million. For State-funded remedial instruction: $7.5 million. For the CPEC task force study on English as a Second Language: $70,000.

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12. The Trustees of the California State University, the Regents of the University of California, and the governing boards of accredited degree-granting independent colleges and universities shall make sure that the education of teachers is among the highest priorities for institutional and systemwide support.

The Trustees of the California State University and the Regents of the University of California shall formally recognize professional service to the public schools as part of their faculties' responsibilities. Faculty who contribute in this role should be rewarded through the retention, promotion, and tenure process or by other appropriate means such as reduced teaching loads or released time for related research. The Board of Governors of the California Community Colleges shall establish a pilot program or explore other means to encourage an enhanced role for Community College faculty.

The Trustees of the California State University shall establish a system of consultation with the public schools so that public school teachers and administrators will have an opportunity to assist in determining the education research agenda of the California State University.

The teaching profession itself should bear a major responsibility for the improvement of teacher education. The California State University and the University of California shall require teacher candidates to participate in classroom programs in which each is jointly evaluated by a district teacher and a faculty member of the student's teacher training program. In addition, the state by statute shall require professional appraisal of individual teacher candidates -- as well as program approval of the institution -- prior to certification.

Cost: $2.26 million for faculty released time for 20 faculty on each of the public university's general campuses.

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13. The governing boards, in consultation with the faculty, shall be responsible for the coherence and the quality of the undergraduate curriculum, and, consistent with statutory mission and role, they shall publish clear statements citing specific curricular goals, objectives, and priorities for the segments as a whole and for each of the campuses.

Governing boards must be forceful and proactive in protecting and advancing general education within the undergraduate curriculum and shall carefully consider in consultation with the faculty the following actions: (1) creating a common general education core curriculum, or designing coherent breadth requirements with comprehensible goals and objectives; (2) requiring two full years of general education, or developing programs to ensure that general education is a continuing part of a student's education through the undergraduate years; (3) expanding international and multicultural education programs to enhance opportunities for developing understanding in these areas; (4) requiring competency in a second language for all college graduates both to meet the needs of a multilingual world and to have the opportunity to understand a different culture through its primary mode of expression; and (5) providing for voluntary public service for credit, when appropriate, to enhance opportunities for the development of civic responsibility.

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14. The segmental governing boards must affirm that the oversight of teaching quality is as important a governance issue as their other management and administrative responsibilities. They must require regular reports from the campuses and the systemwide chief executive officers as to the state and quality of undergraduate instruction for each campus and for the segment as a whole. Such reports should have specific performance measures that make it possible to determine the quality of instruction in each of the colleges and universities.

The Trustees of the California State University shall by policy declare and ensure that teaching is given the greatest weight among the factors considered in the retention, promotion, and tenure process. The Regents of the University of California shall by policy declare and ensure that teaching is in fact of equal weight to research in retention, promotion, and tenure. All three public segmental governing boards shall ensure that teaching is of major importance in post-tenure review.

Cost: $3.324 million (for $25,000 for each of the 133 public campuses).

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15. The governing boards shall ensure that all faculty and teaching assistants have the necessary instructional skills prior to entering a classroom. They shall provide incentives for teaching excellence not only through the retention, promotion, and tenure process but by other appropriate mechanisms as well. Direct faculty interaction with students through advising and other out-of-classroom contact are integral parts of the teaching function and should be encouraged and rewarded accordingly.

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16. The segmental governing boards shall thoroughly evaluate policies regarding part-time faculty to ensure that all departmental and collegial responsibilities are met. Through periodic review, they shall make sure that the use of part-time faculty does not undermine instructional quality or become excessive and is reduced where it is already excessive.

The Board of Governors of the California Community Colleges shall develop pilot programs that offer faculty rolling contracts of two to five years in length as an alternative to multiple part-time appointments at several institutions, giving the college greater latitude in meeting staffing needs and permitting part-time faculty to better meet student needs. Tenured faculty members should not be discouraged from transferring between districts as need occurs, and the Board shall by policy ensure that tenure in one district can be regained in a new district in a relatively short period of time.

17. The Governor and Legislature, by providing adequate state financial support, and the governing boards, by policy, shall actively encourage and support faculty professional development.

Cost: To be determined by CPEC study.

18. The Governor and Legislature shall stem the trend toward increased student-faculty ratios and shall carefully consider whether current student-faculty ratios are detrimental to quality instruction and should be reduced.

19. The State Job Training Coordinating Council shall establish an integrated statewide system of planning, evaluation, and data collection for the use of all public and private institutions which offer vocational education and job training. The Council shall be responsible for the initial establishment of the system and in doing so shall consult with the Board of Governors, the California Postsecondary Education Commission, and the State Board of Education. All private occupational schools shall be required to participate in the state system of data collection as a condition of accreditation, licensing, or approval by the state.

20. The Governor and Legislature shall fund a strengthened program review office in the California Postsecondary Education Commission specifically to include the capacity to review vocational and occupational programs in the two-year and four-year institutions.

Cost: $60,000 for one additional staff to review 30-40 programs annually.

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21. The Regents of the University of California and the Trustees of the California State University shall maintain consistent policies for rigorous and systematic review of the quality of graduate programs. In addition to quality evaluations, reviews must determine whether there is a continuing need and adequate resources for both existing and new programs; programs for which both conditions do not exist shall be phased out. CPEC shall advise the segments, the Governor, and the Legislature on segmental compliance with this policy.

The California Postsecondary Education Commission seek private foundation or state support for a blue ribbon commission to study the master's degree in the California State University, the University of California, and the independent institutions.

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22. The governing boards of the California State University, the University of California, and the California Community Colleges shall establish appropriate infrastructures in their systems and on their campuses so that the new instructional technologies are effectively integrated in support of the fundamental institutional missions.

The California State University shall have a particular responsibility for and shall receive state support to research and evaluate the impact new instructional technologies have on the learning process. CSU shall work in close consultation with the University of California, the California Community Colleges, the State Department of Education, and representatives of the independent institutions through the California Education Round Table.

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23. To assure quality and breadth in the undergraduate curriculum, the chief executive officers and other representatives of the University of California, the California State University, the California Community Colleges, and California's accredited private institutions must exert their influence as board members of various accrediting agencies to insure that:

(a) the regional accrediting commissions take sufficient cognizance of student "outcomes" in evaluating institutions -- holding colleges and universities accountable for clear expectations for student learning and appropriate assessment programs to determine whether the expectations are being met; and

(b) the programmatic accrediting agencies acknowledge the larger institutional missions and purposes of undergraduate colleges and the importance of maintaining the integrity of the general education curriculum guarding against over specialization and excessive requirements for academic majors.

Cost: $225,000 annually for staff and operating expenses.

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24. The California Postsecondary Education Commission shall have the following responsibilities with regard to long-range planning in consultation with the segments: (1) development of a common definition of long-range planning; (2) development of a common set of assumptions upon which such planning is to be based; (3) review of segmental activities to verify that they periodically prepare and update long-range plans based upon the common set of assumptions; and (4) annual preparation of detailed 20-year projections of postsecondary enrollment in the public and private sectors at all levels of instruction, built upon the projections prepared by the Department of Finance.

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25. In reviewing the proposed growth of existing campuses and the development of new campuses and off-campus centers, the segmental governing boards and the California Postsecondary Education Commission shall verify that the proposed growth is appropriate to the mission of each segment. The Community Colleges shall be expanded as necessary to accommodate growth in demand for lower-division academic and vocational instruction for credit; the California State University shall be expanded as necessary to accommodate growth in demand for upper-division instruction and instruction through the master's degree and the accompanying lower-division enrollment; the University of California shall be expanded as necessary to accommodate approved growth in graduate and postgraduate instruction and the accompanying undergraduate enrollment.

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26. The California Postsecondary Education Commission, in cooperation with the Department of Finance and the Legislative Analyst, and in consultation with the segments, shall regularly review methods of controlling state-supported costs of postsecondary education and for the elimination of waste and unnecessary duplication. These reviews shall include a careful examination of ways in which unused capacity among private institutions may be employed to accommodate enrollment growth at the undergraduate and graduate levels and thus reduce costs to the state's taxpayers.

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27. The California Postsecondary Education Commission, with the assistance of the Department of Finance, the Legislative Analyst, and the three public segments of postsecondary education, shall regularly examine the formulas used to budget state support for each of the public segments. The objective of these studies shall be to make recommendations to the Governor and Legislature about ways to eliminate incentives for excessive spending, eliminate differences in funding formulas that are not justified by differences in role and mission, and maintain an equitable allocation of state support among the three segments. These studies should also include determination of costs by level of instruction for all three public segments.

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28. The California Community Colleges shall be funded by the state through the annual budget act according to standards and workload measures appropriate to their status as postsecondary institutions. The Board of Governors shall be authorized by statute to allocate state support among the districts and colleges according to rules and regulations to be established by the Board. Funding for Community College capital outlay projects shall be provided by the state in the same manner as is employed for the University of California and the California State University.

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29. The statutory provision limiting the annual increase in state support for the Community Colleges to the percentage growth in the state's adult population shall be repealed by the Legislature, but the Board of Governors shall be responsible for guarding against sudden unanticipated increases in enrollment that strain state funding resources.

Cost: $86.5 million.

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30. The state shall continue to be primarily responsible for funding postsecondary education, and students shall continue to pay a portion of the cost; but student charges shall not be changed substantially in any single year. Fees shall be maintained by the state and governing boards in a constant relationship to state support within each segment, and fee increases that do occur shall be waived or offset by financial aid for needy students.

The Board of Governors shall be given statutory responsibility for establishing Community College charges.

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31. The segmental governing boards shall have authority to differentiate between undergraduate and graduate levels and between professional programs at the graduate level in establishing student charges. Segmental governing boards shall have the authority to set fees in relation to costs in a manner that will not unduly influence student program decisions.

32. Nonresident tuition for all three public segments shall be equal to the average cost of instruction and related services, including administration but excluding research, except that it shall not exceed the average charge at comparable institutions in other states.

Cost: An estimated annual savings of $10 million.

33. The Student Aid Commission shall, by statute, have primary responsibility for formulating state financial aid policy and shall administer all state-funded student financial aid programs other than those administered by the institutions.

Supplementary recommendations

1. *Intersegmental Coordinating Council*

The California Education Round Table shall establish an Intersegmental Coordinating Council to assist it in carrying out its responsibilities. This Council shall be made up of senior staff from each segment and the California Postsecondary Education Commission, and shall include representatives of the academic senates and students of each postsecondary segment.

2. *Intersegmental Degree Programs Board*

The Intersegmental Degree Programs Board shall be composed of appointees representing the University of California, the California State University, and the California Community Colleges, as well as representatives from the independent colleges and the State Superintendent of Public Instruction. The funding for the Intersegmental Degree Programs Board shall be through the California State University budget, and staff shall be under the direction of the Intersegmental Degree Programs Board.

The Intersegmental Degree Programs Board shall examine the issue of access to and need for intersegmental graduate degree programs, as one of its tasks. Such intersegmental degree programs as the Intersegmental Degree Programs Board recommends shall be subject to the normal review processes of the segments as well as those of the California Postsecondary Education Commission. The development of policies and procedures for such intersegmental degrees, a regular review of and reporting of such programs, and a process for airing differences shall be the responsibility of the California Education Round Table.

The Intersegmental Degree Programs Board shall be charged with the responsibility to find ways to use all of the state's postsecondary education resources in meeting determined needs and eliminating obstacles to a more expansive use of intersegmental graduate degrees. The effectiveness of the Intersegmental Degree Programs Board and the intersegmental degree in meeting students access to and need for doctoral education shall be subject to review in five years by the California Postsecondary Education Commission.

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3. *Community College governance*

The California Community Colleges shall be reestablished in statute as a unified state-local postsecondary system. They shall no longer be designated in statute as secondary schools or schools that make up a part of the public school system. The California Community Colleges should have the following characteristics:

- State *Governing Board*

The California Community Colleges shall be administered by a Board of Governors with the following membership: the Governor, Lieutenant Governor, Speaker of the Assembly, Superintendent of Public Instruction, and Chancellor as ex officio members; twelve members appointed by the Governor for eight-year terms, of which four are to be past or present members of district governing boards; one faculty member and one student member.

- *Powers and duties*

The Board of Governors shall appoint the Chancellor of the California Community Colleges and confirm the appointment of district chief executive officers.

The Board of Governors shall have comprehensive authority with regard to academic affairs, including, but not limited to student academic standards, approval of courses and programs, and approval of campus academic plans. This authority may be delegated to the district governing boards or the academic senates as the Board deems appropriate.

All state support for the Community Colleges shall be appropriated to the Board of Governors according to nonstatutory formulas. The Board shall determine by regulation how this support is to be allocated among the districts.

The Board of Governors shall establish minimum standards for the employment of academic and administrative staff by the districts.

The Chancellor's Office shall be removed from the state civil service system (by amendment of the California Constitution) and a separate merit system established by statute. The Legislature shall authorize the Board of Governors to determine where the Office of the Chancellor should be located.

- *Local Governing Boards*

The state shall be divided into Community College Districts, each with a locally elected governing board responsible for the operation of one or more Community Colleges. Two or more existing districts may be consolidated or otherwise reorganized subject to approval by the Board of Governors.

Each district governing board shall consist of five to nine members elected to four-year terms plus one student member serving a one-year term. Elections for district governing boards shall be held in November of even-numbered years.

- *Powers and duties*

The district governing boards shall appoint the district chief executive officers, subject to confirmation by the Board of Governors, and shall employ all other district personnel as provided by law.

The district governing boards shall have such responsibilities for the academic and financial affairs of the district as are delegated by the Board of Governors.

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4. *Budget Formulas*

In Chapter IV (Recommendation 27), the California Postsecondary Education Commission is charged to take the lead in a regular examination of the equity of state budget formulas. The review should include the impact of such formulas on workload issues such as class size and teacher load.

5. *Remedial Education*

Except in the most exceptional circumstances, and then only in the case of special-action students, the University of California should not offer remedial courses below "Pre-College Level 1," and the California State University should not offer such courses below "Pre-College Level 2" as defined in the remediation taxonomy.

Recommended studies

1. State-*Supported Noncredit Instruction*

Because of conflicting views as to the proper scope and purpose of state support for noncredit instruction in the Community Colleges, the California Postsecondary Education Commission, in consultation with the Board of Governors and the State Board of Education, shall conduct a study of the current and projected need for noncredit instruction, including the ten state-funded areas, in the Community Colleges and public school system adult schools.

If the study finds that there is continued need for some or all of such programs in the Community Colleges, it will delineate the scope of such programs. The findings of the study will be reported to the Board of Governors of the California Community Colleges. The Board will review the CPEC findings and determine which state-supported programs are postsecondary and should continue to receive state support, which should be offered only as fee-supported community service courses, and which should be assigned to the adult schools. The Board may also determine where exceptions are appropriate because "adult education" is offered solely or largely by the Community College districts.

2. *English as a Second Language*

The CPEC task force on ESL programs, recommended in Chapter II, should include representatives from postsecondary education, the adult education sections of the State Department of Education, professional organizations such as CATESOL representing those involved in teaching ESL, and representatives of the secondary schools.

3. *Private Postsecondary Education Accreditation*

The California Postsecondary Education Commission should begin its statutorily mandated review of existing standards and the appropriate administrative structure for state supervision of private postsecondary institutions by no later than 1988.

In conducting its review, CPEC should specifically consider consolidation of the "approved" and "authorized" categories of licensure for nonaccredited degree-granting institutions; prohibition of nonaccredited institutions from operating in the state; establishment of a single process of licensure for all private institutions; modification of existing statutory language to delete references to comparability between approved and accredited institutions; prohibition of nonaccredited institutions from granting degrees beyond the baccalaureate; establishment of a hierarchy of licensure in which institutions would be required to move to accredited status within a stipulated period of time; establish the Council for Private Postsecondary Education Institutions and the Office of Private Postsecondary Education as an entity separate from the State Department of Education; and restructure the membership of the Council on Private Postsecondary Educational Institutions to provide a majority of lay citizens without current or prior employment or business connections to private postsecondary institutions that fall under the Council's jurisdiction.

Appendix B 1987-88 State Appropriations

ON July 7, Governor George Deukmejian signed the 1987 Budget Act. For the fourth year in a row, the State Budget provides postsecondary education with increases in State General funds that are larger than both the rate of inflation and the average percentage increase in General Funds for government programs as a whole. This appendix summarizes the budget in general and then describes funding of the public segments of higher education and the California Student Aid Commission's programs.

Overall Funding Levels in the 1987 Budget Act

The 1987-88 State Budget contains $40.5 billion in *total* State expenditures (Special Funds, State Fees, Bond Funds, and General Funds), which is $1.3 billion more than the estimated level of expenditures in the 1986-87 budget. State General Fund expenditures in the 1987 Budget Act (presented in Display 27 on the next page) grew by 4.1 percent over 1986-87. The budget is only one-tenth of 1 percent ($45 million) under the spending ceiling set by the "Gann Limit" approved by the voters in 1979 as Proposition 4.

In signing the 1987-88 budget, the Governor set aside $1.1 billion in monies collected in excess of the State's appropriations limit that he proposes be returned to the taxpayers. He also deleted a total of $663 million from the budget in programmatic increases augmented by the State Legislature. His major vetoes included:

- $106 million in Medi-Cal funding;
- $76 million for K-12 urban impact aid;
- $69 million for medically indigent services;
- $32 million in K-12 teacher improvement program funds;
- $27 million for increases in California State University faculty salaries;
- $23 million for funding AIDS research; and
- $19 million for Alzheimer's disease programs.

Note: This appendix is adapted from *Appropriations in the 1987-88 State Budget for the Public Segments of Higher Education: A Staff Report to the California Postsecondary Education Commission* (Commission Report 87-35, September 1987).

DISPLAY 27 Summary of State General Fund Revenues and Expenditures in the 1987-88 Budget, in Thousands of Dollars

	1986-87	1987-88	Percent Change
REVENUES			
Prior Year Balance Available	$ 686,300	$ 580,700	- 15.4%
Revenues and Transfers	32,478,000	33,278,200	+ 2.5
Total Resources Available	$ 33,164,300	$ 33,858,900	+ 2.1
EXPENDITURES			
1987-88 Budget Approved by the Legislature	$31,497,600	$ 33,365,000	+ 5.9
Governor's Vetoes[1]	10,000	592,900	--
Final Adjusted Expenditures	$31,487,600	$ 32,772,100	+ 4.1
Reserve Fund for Economic Uncertainty	$570,000	$ 1,025,800	+ 80.0
Other Reserves[2]	10,000	61,000	--
Proposition 4 Surplus	1,096,000	0	--

1. Vetoes are adjusted to reflect actions taken during the 1986-87 fiscal year to restore funding for $400 million in PERS-related vetoes. Only vetoes of State General Fund expenditures are shown here; the text references the total amount of money vetoed.

2. For 1987-88, this includes $38 million which the Governor set aside to fund expected deficiencies in the budget.

Source: Office of the Governor Press Release 534, July 7, 1987.

Funding Levels for the Public Segments and the Student Aid Commission

State funding for all levels of education totals $22.4 billion in the 1987-88 budget -- a 4.7 percent increase over 1986-87 funding levels. The State General Fund increase for public education is 3.9 percent. The California Community Colleges receive a 7.1 percent increase over 1986-87 funding -- the first time in the 1980s that they have had the largest yearly percentage gain of the three higher education segments.

Display 28 on the opposite page presents percentage increases in 1987-88 State General Funds over the 1986-87 and 1980-81 budgets. As it shows, the Community Colleges' State Budget has clearly grown the least in this decade, in considerable degree due to enrollment losses and low cost-of-living adjustments based on a statutory index. Enrollment at the Community Colleges declined by almost 20 percent between Fall 1981 and Fall 1984. In recent years, the enrollment decline has been reversed, but the increases are funded at a marginal rate and there is a cap on the amount of enrollment growth that the state will fund each year.

DISPLAY 28 *Percentage Changes in State General Funds, Comparing General Funds in the 1987-88 Budget with General Funds in the 1980-81 and 1986-87 State Budgets for All Levels of Education and for the General Fund Itself*

	1987-88 Budget Percent Increase Over 1980-81	1987-88 Budget Percent Increase Over 1986-87
EDUCATION SYSTEMS		
K-12 Education	60.2%	2.7%
California Community Colleges	20.8	7.1
University of California	76.9	6.2
The California State University[1]	51.8	6.9
TOTALS		
Postsecondary education	58.8%	6.8%
All systems of education	44.6	3.9
State General Fund	54.6	4.1

[1] Totals adjusted to compare only State General Funds and do not include student fee revenues.

Sources: Office of the Governor Press Release 534, July 7, 1987; and *Governor's Budgets* for 1981-82 and 1982-83.

Funding for the K-12 educational segment increased only 2.7 percent -- less than postsecondary funding's increase of 6.8 percent and less than the average 4.1 percent increase for state programs as a whole. The Governor vetoed $164 million from the K-12 budget that was approved by the Legislature.

Postsecondary education's share of total General Fund expenditures grew to more than 16 percent in the 1987-88 budget. The Governor indicated a priority for higher education by exempting the University and State University from an otherwise across-the-board 1 percent unallocated reduction in the budget. All other State agencies funded through the budgeting category "State Operations" received this cut, but the University and State University were exempted for a combined savings to the systems of $32 million. For the fourth consecutive year, the Governor withheld funds for merit salary adjustments and price increases from state agencies' budgets, including the University and State University. However, faculty at the University and the State University did receive funding for their merit salary adjustments.

The 1987-88 budget provides almost $300 million for postsecondary education capital outlay projects. In addition, nearly $240 million was reappropriated from the 1986 Budget Act.

Displays 29 through 32 on the following pages compare the 1986-87 and 1987-88 State Budgets for the public segments of postsecondary education in terms of both support for current operations and capital outlay expenditures, and Display 33 on page 218 shows details about financial aid programs administered by the Student Aid Commission.

University of California

Support for Current Operations

The University's $1.9 billion in State General Funds continues funding for several state policy initiatives and funds previous agreements between the state and the University. Among new State initiatives, AIDS research receives more than $9 million and increases of $500,000 for toxics research and for Pacific Rim studies. In keeping with the state's agreement to reduce the backlogs in physical plant needs, $3 million is provided for deferred maintenance and $2 million for instructional computing equipment.

The Budget Act provides $3 million in direct appropriations for the University's teaching hospitals at Davis, Irvine, and San Diego, with an additional $5 million available through a deficiency appropriation if needed. This is part of the agreement between the state and the University to provide operating and capital funds to make the three hospitals more attractive to private-paying patients.

Other highlights of the University's 1987-88 budget for support of current operations include:

- $23 million for a 5.7 percent increase in faculty salaries, effective January 1, 1988, and $17 million to fully fund faculty merit salary adjustments. This is the fourth year in a row that the Governor has provided funds for increases that exceed the parity figure published by the Commission according to the faculty salary comparison methodology;
- $14.7 million to fund projected enrollment increases of 2,658 undergraduates and 200 general-campus graduate students;
- $9.2 million for AIDS research, $500,000 for research on heart disease prevention, and $500,000 for the Keck Observatory in Hawaii; and
- $11 million for a 4 percent increase in nonfaculty salaries, effective January 1, 1988, as was provided for other state employees.

Capital Outlay

Thirty-eight new projects and 43 projects from the 1986 Budget Act were funded in the University's 1987-88 budget. In terms of new monies, just over

DISPLAY 29 University of California Current Operating Support in the 1986 and 1987 Budget Acts and State Capital Outlay Funding for 1987-88, in Thousands of Dollars

	1986-87	1987-88	Percent Change
SUPPORT FOR CURRENT OPERATIONS (Budgeted Programs)			
General Fund	$ 1,788,300	$ 1,897,300	+6.7%
Fees and Other General Purpose Funds	231,987	253,568	-
Lottery	12,110	15,081	-
Subtotal	$ 2,032,397	$2,165,949	+6.7%
Other Funds	1,565,145	1,636,166	-
TOTAL BUDGETED PROGRAMS	$3,597,542	$3,802,115	+5.7%

	1987-88 Budget Act
CAPITAL OUTLAY	
High Technology Revenue Bonds	$56,979
Capital Outlay Fund for Public Higher Education (COFPHE)	-0-
Higher Education Capital Outlay Bond Fund	50,200
Special Account for Capital Outlay (SAFCO)	1,629
Public Buildings Construction Fund	31,563
TOTAL, STATE-SUPPORTED CAPITAL OUTLAY FUNDS[1]	$140,371

[1] This does not include $238.8 million which was reappropriated from the 1986 Budget Act.

Sources: Senate Bill 152, Chapter 135, Statutes of 1987; and the 1987-88 *Governor's Budget* and *May Revision*.

80 percent of the capital outlay funding initially requested by the Regents is contained in the budget. Major projects include:

- $40 million for working drawings and construction of two biological sciences buildings and $9 million to construct a cancer center on the Irvine campus;
- $23 million for the expansion of Shields Library at the Davis campus;
- $22 million to construct a campus library at the San Francisco campus;
- $8 million to construct a Graduate School of International Relations and Pacific Studies at the San Diego campus; and
- $5 million for the second phase of construction of a new electrical distribution system at the Berkeley campus.

The California State University

The 1987-88 budget for the California State University contains monies for student enrollment growth, faculty salary increases, and important instructional equipment and capital needs. The budget includes more than $100 million for seismic strengthening and rehabilitation of buildings and for new laboratory, classroom, library, and support facilities. Funding is also provided for land acquisition and the initial planning for two new, permanent off-campus centers, one in Northern San Diego County and one in Ventura County. Funding for the San Diego facility is consistent with the Commission's recommendations adopted at its February 1987 meeting.

Support for Current Operations

To address backlogs of need in physical plant and equipment areas, the budget provides $5 million for instructional equipment replacement, $2 million for deferred maintenance, and $7 million for computing equipment. The State University has a total of $9 million available to purchase new equipment in 1987-88 from its budget formula-driven equipment allotment. Six million dollars is also provided for an asbestos abatement program, whereby the State University will identify its highest-risk facilities for asbestos removal.

Other highlights of the State University's operating budget include:

- $27 million for a 6.9 percent increase in faculty salaries effective January 1, 1988, in accordance with the Commission's faculty salary methodology computations, and $7 million to fully fund faculty merit salary adjustments;
- $18 million to fund the projected enrollment increase of 5,985 full-time-equivalent students;
- $11 million for a nonfaculty salary increase of 4 percent, effective January 1, 1988, as was provided for other State employees; and
- $300,000 for a comprehensive evaluation of the need for child day care services in the State University.

Capital Outlay

Ninety capital outlay projects were funded for the State University in the 1987-88 budget -- 56 of them new and 34 reappropriated from 1986-87. The State University received more than 77 percent of the total amount of new capital outlay funding requested in the Trustees' amended budget. In addition to these funds, the State University anticipates receiving $14.5 million

DISPLAY 30 California State University Current Operating Support in the 1986 and 1987 Budget Acts and 1987-88 Capital Outlay Funding, in Thousands of Dollars

	1986-87	1987-88	Percent Change
SUPPORT FOR CURRENT OPERATIONS			
General Fund [1]	$ 1,625,900	$ 1,737,100	+6.8%
Lottery	28,409	27,022	-
Subtotal	$ 1,654,309	$ 1,764,122	+6.6%
Other Funds	409,873	467,211	-
TOTAL, PROGRAMS	$ 2,064,182	$ 2,231,333	+5.9%

	1987-88 Budget Act
CAPITAL OUTLAY [2]	
Higher Education Capital Outlay Bond Fund	$ 67,180
Capital Outlay Fund for Public Higher Education (COFPHE)	-0-
Special Account for Capital Outlay (SAFCO)	2,174
Public Buildings Construction Fund	36,808
TOTAL, STATE-SUPPORTED CAPITAL OUTLAY FUNDS	$106,162

1. Includes student fee revenues, which are now reflected as a general reimbursement to the state.
2. The capital outlay display does not include $14.5 million for non-state projects expected to be available from the sale of Energy Revenue Bonds, nor does it include $80.3 million in reappropriations from the 1986 Budget Act.

Sources: Senate Bill 152, Chapter 135 of the Statutes of 1987; and the 1987-88 *Governor's Budget* and *May Revision.*

for six energy efficiency projects to be funded separately through Energy Revenue Bonds. Major projects include:

- $19 million for land acquisition for the North San Diego center, as was recommended by the Commission, and for the Ventura center;
- $6 million for working drawings and construction of a new business services building at Humboldt State;
- $5.6 million for construction and renovation of the science building at San Jose State;
- $3.6 million for the second phase of renovation of chemistry laboratories at California State University, Long Beach; and
- $3 million for a women's gymnasium at San Diego State.

California Community Colleges

Support for Current Operations

The 1987-88 operations budget for the California Community Colleges contains some of the most significant increases this decade, with funding for statutory requirements, enrollment growth, and new programs. It includes $66.4 million for a 3.4 percent increase in general apportionment full-year statutory cost-of-living adjustments. Additional funding is also available for districts whose revenues per ADA are below the statewide average (known as "equalization"). The budget also provides $26.1 million (a 2.1 percent increase) in ADA growth funding and $19 million for 1987-88 Community College district base revenue for unfunded 1986-87 ADA growth.

The budget assumes that the current statutes authorizing the $50 student fee will be extended beyond its current sunset date of January 1, 1988, and that the funding mechanism in SB 851 for Community Colleges will be continued. AB 304 (Hayden) that extends the SB 851 mechanism for two years has been signed into law and AB 2336 (Johnston) on Community College student fees is currently being considered by the Legislature. Funding of $12.5 million has been provided in order to continue financial aid for students who cannot afford the current student fee.

Other highlights of the Community Colleges' 1987-88 operating budget include:

- $22.2 million in State funds for computer equipment and operational support of the program of assessment, counseling, placement, and follow-up known as "matriculation." This program has been endorsed by the Commission for the Review of the Master Plan, the Postsecondary Education Commission, and other groups that work with the Community Colleges. The Governor had initially proposed $7 million for the matriculation program to be matched dollar-per-dollar by local districts but the final budget eliminates the matching-funds provision;
- $17 million from the State General Fund and $35 million reappropriated from the Higher Education Capital Outlay Bond Fund to purchase library materials and to replace obsolete instructional equipment;
- $15 million for deferred maintenance and special repairs, with a 1:1 district matching-fund requirement, and $5 million to reduce exposure to hazardous substances in Community College buildings;
- $11 million to fund ADA above the current cap on funded enrollment in basic skills courses such as remedial mathematics, English, and English as a second language;

DISPLAY 31 California Community Colleges Support for Current Operations in the 1986 and 1987 Budget Acts and Capital Outlay Funds for 1987-88, in Thousands of Dollars

	1986-87	1987-88	Percent Change
SUPPORT FOR CURRENT OPERATIONS			
General Fund	$ 1,233,334	$ 1,321,421	+7.1%
Local Revenue	612,324	659,900	+7.8
Lottery	55,205	72,445	-
State School Funds[1]	1,725	2,206	-
TOTAL	$ 1,902,598	$ 2,055,972	+8.1%

	1987-88 Budget Act
CAPITAL OUTLAY	
Higher Education Capital Outlay Bond Fund	$ 31,869
Capital Outlay Fund for Public Higher Education (COFPHE)	-0-
Special Account for Capital Outlay (SAFCO)	311
Public Buildings Construction Fund	18,134
TOTAL, STATE-SUPPORTED CAPITAL OUTLAY FUNDS	$50,191

1. Federal Mineral Revenues, in lieu of property taxes.

Sources: Senate Bill No. 152, Chapter 135, Statutes of 1987; and the 1987-88 *Governor's Budget* and *May Revision*.

- $10 million to fund ADA growth (above the cap) generated by Community College students in the state workfare program, "Greater Avenues for Independence" (GAIN);
- $1.8 million for a full-year 3.4 percent cost-of-living adjustment for Extended Opportunity Programs and Services and Disabled Students Programs and Services, and $1 million for Learning Disabled Students. Statutory cost-of-living increases for these programs and funding for programs for learning disabled students has been consistently recommended by the Commission; and
- $150,000 in new funding for the Puente Project, which assists Mexican-American students in completing their Community College education and transferring to four-year colleges. An additional $110,000 for this program is contained in the University of California's budget and is to be matched with $100,000 in private sector funding.

Capital Outlay

There were 50 capital outlay projects funded for the Community Colleges in the 1987-88 budget. Almost 90 percent of the total amount of capital outlay funding initially requested by the Board of Governors was included in the budget. Major projects include:

- $8.5 million to construct the instructional and administration building at Los Angeles Mission College; $3 million for working drawings and construction of an instructional center at San Diego Miramar College; and $3 million for the Orange Canyon Campus of Rancho Santiago College. All three of these projects were approved by the Commission in the past.
- $4.4 million to construct a vocational technology building at Saddleback College.
- $3.8 million for a multi-purpose instructional facility and gymnasium at Columbia College.

Other Public Institutions

Hastings College of the Law

Hastings College of the Law receives more than $12 million in total funds in the 1987-88 budget. The budget includes the continuation of the reduction in size of the entering class by 50 students for Fall 1987. This will result in a first year class size of 400 students in order to comply with American Bar Association standards and reduce overall enrollment to 1,200 students by Fall 1990.

California Maritime Academy

The California Maritime Academy receives a total of $6.5 million in the 1987 Budget Act. Student fees at the Maritime Academy are reduced by approximately $120 per student to bring the Academy's student fee charges in line with action taken in 1986-87 to maintain University and State University student fees at the 1985-86 level. The Maritime Academy also received $50,000 for student fee waivers for economically disadvantaged students.

DISPLAY 32 Total Funding for Hastings College of the Law and the California Maritime Academy in the 1986 and 1987 Budget Acts, in Thousands of Dollars

	1986-87	1987-88	Percent Change
HASTINGS COLLEGE OF THE LAW			
General Fund	$ 11,808	$ 11,623	-1.6%
Other Funds	746	776	-
TOTAL	$ 12,554	$ 12,399	-1.2%
CALIFORNIA MARITIME ACADEMY			
General Fund	$ 6,011	$6,103	+1.5%
Other Funds	431	441	-
TOTAL	$ 6,452	$ 6,544	+1.2%

Sources: Senate Bill No. 152, Chapter 135 of the Statutes of 1987; and the 1987-88 *Governor's Budget* and *May Revision.*

California Student Aid Commission

The 1987-88 budget contained few new initiatives for the Student Aid Commission. Baseline adjustments of $3.3 million are funded, including a 5 percent increase for the Commission's Cal Grant Program, providing funds for the same number of new award recipients as in 1986-87 and an overall increase in the number of students renewing their awards.

The volume of loans administered by the Guaranteed Student Loan Program is expected to increase by $620 million in new loans for 230,000 students in 1987-88. The total value of outstanding loans in the California program is in excess of $5 billion. Defaults on students loans are expected to decrease from more than $200 million in 1986-87 to approximately $160 million in 1987-88.

Highlights of the Student Aid Commission's 1987-88 budget for programs include:

- $750,000 for work-study grants to 1,500 students on 15 campuses. This program was initiated in accordance with the Commission's 1985 *Proposal for a California State-Funded Work-Study Program.*
- $700,000 to increase the maximum amount of Cal Grant A awards by $50 to a ceiling of $4,370.

DISPLAY 33 1986 and 1987 Budget Acts for the California Student Aid Commission, in Thousands of Dollars, and the Number of Awards Granted in 1986-87 and Budgeted for 1987-88

OPERATIONS BUDGET	1986-87	1987-88	Percent Change
General Fund	$ 112,027	$ 125,700	+12.2%
Guaranteed Loan Reserve Fund	27,578	33,152	+20.2
Federal Funds	168,087	160,725	- 4.4
TOTAL BUDGET	$307,692	$319,577	+3.9%
NUMBER OF AWARDS			
Cal Grant A	43,231	45,508	+5.3%
Cal Grant B	24,592	26,460	+7.6
Cal Grant C	2,287	2,287	-
Bilingual Teacher Grants	583	376	-35.5
Graduate Fellowship	855	950	+11.1
Teacher Shortage Loan Assumptions	137	57	-58.4
Work Study	–	1,500	-
Other[1]	1,566	1,566	-
TOTAL	75,251	78,704	+7.5%

1. Includes: the Student Opportunity and Access Program, the Law Enforcement Personnel Dependents Scholarship Program, and Congressional Teacher Scholarships.

Source: Student Aid Commission information sheet dated 7/31/87; Senate Bill No. 152, Chapter 135 of the Statutes of 1987; and the 1987-88 *Governor's Budget* and *May Revision*.

- $100,000 to increase the maximum amount of Cal Grant B awards by $60 to a ceiling of $5,460 (including both tuition costs and subsistence).

Conclusion

The State's 1987-88 budget provides increased funds for all three segments of public higher education. It includes funds for faculty salary increases at the University and State University, and it fully funds enrollment growth for all three segments, including enrollment over the current "funded enrollment cap" at the Community Colleges.

This is a particularly good budget for the Community Colleges, which receive almost $90 million more in State General Funds in 1987-88 than in 1986-87 and a significant increase in property tax revenues. The Chancellor's Office of the Community Colleges receives $1 million for 15 new staff positions to provide additional support to the Board of Governors and to the local districts. With the statutory finance mechanism fully funded, and with substantial enrollment growth funds provided, local districts will find it easier to offer a full program during the 1987-88 fiscal year. However, these funding increases are more accurately viewed in the historical perspective of limited funding increases throughout most of this decade.

Beginning last year, the public education systems (higher education and K-12) initiated a process whereby joint proposals for new intersegmental programs would be presented for funding in the state budget. While three of those proposals were funded in last year's budget, none were funded this year. However, the 1987-88 budget does maintain some important programs. It provides $660,000 for the State University efforts to better prepare minority students for college and a program to help reduce the turnover rate among new teachers in inner city schools. The University will spend $5.1 million of its own and state funds to continue its efforts to increase the number of underrepresented minority and women faculty and graduate students. Finally, the budget provides monies for some new programs, such as the long-sought Community College matriculation program, college work-study grants, and University research initiatives.

Appendix C California Postsecondary Education Commission Enabling Legislation

Note: The legislation that created the California Postsecondary Education Commission (Assembly Bill 770, Chapter 1187, Statutes of 1973) was incorporated into law as Chapters 11 and 12 of the *California Education Code*. The text of those chapters, which follows, incorporates amendments to the original legislation that were adopted subsequent to its enactment.

The California Postsecondary Education Commission

66900. The Legislature finds that coordination and planning are vital elements in providing postsecondary education to meet the needs of the people of the State of California.

The Legislature intends to create a statewide agency to assure the effective utilization of public postsecondary education resources, thereby eliminating waste and unnecessary duplication, and to promote diversity, innovation, and responsiveness to student and societal needs through planning and coordination.

It is further the intent of the Legislature that educational policy recommendations of the commission shall be a primary consideration in developing state policy and funding for postsecondary education.

It is further the intent of the Legislature that the commission shall have adequate staffing and funding to carry out its duties and responsibilities.

It is further the intent of the Legislature that the commission shall encourage the participation of faculty members, students, administrators, and members of the general public in carrying out its duties and responsibilities.

66901. There is hereby created the California Postsecondary Education Commission, which shall be advisory to the Governor, the Legislature, other appropriate governmental officials, and institutions of postsecondary education. The commission shall be composed of the following members:

a. One representative of the Regents of the University of California designated by the regents, one representative of the Trustees of the California State University designated by the trustees, and one representative of the Board of Governors of the California Community Colleges designated by the board. Representatives of the regents, the trustees, and the board of governors shall be chosen from among the appointed members of their respective boards, but in no instance shall an ex officio member of a governing board serve on the commission.

b. One representative of the independent California colleges and universities which are accredited by a national or regional association which is recognized by the United States Department of Education. This member shall be appointed by the Governor from a list or lists submitted by an association or associations of those institutions.

c. The chair or the designee of the chair of the Council for Private Postsecondary Educational Institutions.

d. The President of the State Board of Education or his or her designee from among the other members of the board.

e. Nine representatives of the general public appointed as follows: three by the Governor, three by the Senate Rules Committee, and three by the Speaker of the Assembly. It is the intent of the Legislature that the commission be broadly and equitably representative of the general public in the appointment of its public members and that the appointing authorities, therefore, shall confer to assure that their combined appointments include adequate representation on the basis of sex and on the basis of the significant racial, ethnic, and economic groups in the state.

No person who is employed by any institution of public or private postsecondary education shall be appointed to or serve on the commission, except that a person who is not a permanent, full-time employee and who has part-time teaching duties which do not exceed six hours per week may be appointed to and serve on the commission.

The commission members designated in subdivisions (a), (c), and (d) shall serve at the pleasure of their respective appointing authorities. The member designated in subdivision (b) shall serve a three-year term. The members designated in subdivision (e) shall each serve a six-year term. The respective appointing authority may appoint an alternate for each member who may, during the member's absence, serve on the commission and vote on matters before the commission.

Any person appointed pursuant to this section may be reappointed to serve additional terms.

Any person appointed pursuant to this section who no longer has the position which made him or her eligible for appointment may nonetheless complete his or her term of office on the commission.

No person appointed pursuant to this section shall, with respect to any matter before the commission, vote for or on behalf of, or in any way exercise the vote of, any other member of the commission.

The commission shall meet as often as it deems necessary to carry out its duties and responsibilities.

Any member of the commission who in any calendar year misses more than one-third of the meetings of the commission forfeits his or her office, thereby creating a vacancy.

The commission shall select a chair from among the members representing the general public. The chair shall hold office for a term of one year and may be selected to successive terms.

There is established an advisory committee to the commission and the director, consisting of the chief executive officers of each of the public segments, or their designees, the Superintendent of Public Instruction or his or her designee, and an executive officer from each of the groups of institutions designated in subdivisions (b) and (c) to be designated by the respective commission representative from such groups. Commission meeting agenda items and associated documents shall be provided to the committee in a timely manner for its consideration and comments.

The commission may appoint any subcommittees it deems necessary to advise the commission on matters of educational policy. The advisory committees may consist of commission members or non-members or both, including students, faculty members, segmental representatives, governmental representatives, and representatives of the public.

The commission shall appoint and may remove a director in the manner hereinafter specified. The director shall appoint persons to any staff positions the commission may authorize.

The commission shall prescribe rules for the transaction of its own affairs, subject, however, to all the following requirements and limitations:

1. The votes of all representatives shall be recorded.
2. Effective action shall require the affirmative vote of a majority of all the duly appointed members of the commission, not including vacant commission seats.

3. The affirmative votes of two-thirds of all the duly appointed members of the commission, not including vacant commission seats, shall be necessary to the appointment of the director.

66902. The commission shall have power to require the governing boards and the institutions of public postsecondary education to submit data on plans and programs, costs, selection and retention of students, enrollments, plant capacities and other matters pertinent to effective planning, policy development, articulation and coordination, and shall furnish information concerning such matters to the Governor and to the Legislature as requested by them.

66902.5 The California Postsecondary Education Commission in cooperation with the Commission for Teacher Preparation and Licensing, the Chancellor's Office of the California Community Colleges, the California State University and Colleges, the University of California if the regents so direct, and the Association of Independent California Colleges and Universities shall review the current status of the transfer of student credit and identify those issues relative to the transferability of credit among the community colleges and four-year institutions of higher education involved in the Bilingual Teacher Grant Program and make recommendations to the Legislature and the statewide articulation conference by May 1, 1981.

66903. The commission shall have the following functions and responsibilities in its capacity as the statewide postsecondary education planning and coordinating agency and adviser to the Legislature and Governor:

1. It shall require the governing boards of the segments of public postsecondary education to develop and submit to the commission institutional and systemwide long-range plans in a form determined by the commission after consultation with the segments.
2. It shall prepare a five-year state plan for postsecondary education which shall integrate the planning efforts of the public segments and other pertinent plans. The commission shall seek to resolve conflicts or inconsistencies among segmental plans in consultation with the segments. If such consultations are unsuccessful the commission shall report the unresolved issues to the Legislature with recommendations for resolution. In developing such plan, the commission shall consider at least the following factors: (a) the need for and location of new facilities, (b) the range and kinds of programs appropriate to each institution or system, (c) the budgetary priorities of the institutions and systems of postsecondary education, (d) the impact of various types and levels of student charges on students and on post-

secondary educational programs and institutions, (e) appropriate levels of state-funded student financial aid, (f) access and admission of students to postsecondary education, (g) the educational programs and resources of private postsecondary institutions, and (h) the provisions of this division differentiating the functions of the public systems of higher education.

3. It shall update the state plan annually.
4. It shall participate in appropriate stages of the executive and legislative budget processes as requested by the executive and legislative branches and shall advise the executive and legislative branches as to whether segmental programmatic budgetary requests are compatible with the state plan. It is not intended that the commission hold independent budget hearings.
5. It shall advise the Legislature and Governor regarding the need for and location of new institutions and campuses of public higher education.
6. It shall review proposals by the public segments for new programs and make recommendations regarding such proposals to the Legislature and the Governor.
7. It shall, in consultation with the public segments, establish a schedule for segmental review of selected educational programs, evaluate the program review processes of the segments, and report its findings and recommendations to the Governor and the Legislature.
8. It shall serve as a stimulus to the segments and institutions of postsecondary education by projecting and identifying societal and educational needs and encouraging adaptability to change.
9. It shall develop and submit plans to the Legislature and the Governor for the funding and administration of a program to encourage innovative educational programs by institutions of postsecondary education.
10. It shall collect or conduct or both collect and conduct studies of projected manpower supply and demand, in cooperation with appropriate state agencies, and disseminate the results of such studies to institutions of postsecondary education and to the public in order to improve the information base upon which student choices are made.
11. It shall periodically review and make recommendations concerning the need for and availability of postsecondary programs for adult and continuing education.

12. It shall develop criteria for evaluating the effectiveness of all aspects of postsecondary education.

13. It shall maintain and update annually an inventory of all off-campus programs and facilities for education, research, and community service operated by public and private institutions of postsecondary education.

14. It shall act as a clearinghouse for postsecondary education information and as a primary source of information for the Legislature, the Governor, and other agencies, and develop a comprehensive data base insuring comparability of data from diverse sources.

15. It shall establish criteria for state support of new and existing programs, in consultation with the public segments, the Department of Finance, and the Joint Legislative Budget Committee.

16. It shall comply with the appropriate provisions of the Education Amendments of 1972 (P.L. 92-318) as specified in Section 67000.

17. It shall consider the relationships between academic and occupational and vocational education programs and shall actively encourage the participation of state and local and public and private persons and agencies with a direct interest in these areas.

18. It shall review all proposals for changes in eligibility pools for admission to public institutions and segments of postsecondary education and shall make recommendations to the Legislature, Governor, and institutions of postsecondary education.

19. It shall report annually on or before January 1st to the Legislature and the Governor regarding the financial conditions of independent institutions, their enrollment and application figures, the number of student spaces available, and the respective cost of utilizing those spaces as compared to providing additional public spaces. Such reports shall include recommendations concerning state policies and programs having a significant impact on independent institutions.

20. It shall, upon request of the Legislature or the Governor, submit to the Legislature and the Governor a report on all matters so requested which are compatible with its role as the statewide postsecondary education planning and coordinating agency and may, from time to time, submit to the Governor and the Legislature a report which contains recommendations as to necessary or desirable changes, if any, in the functions, policies, and programs of the several segments of public and private postsecondary education.

21. It may undertake such other functions and responsibilities as are compatible with its role as the statewide postsecondary education planning and coordinating agency.

66903.1 The commission shall report to the Legislature and the Governor on March 1, 1986, and every two years thereafter until, and including, 1990, on the representation and utilization of ethnic minorities and women among academic, administrative, and other employees at the California State University, the University of California, and the public community colleges. To prepare this report, the commission shall collect data from each of these segments of public postsecondary education. The format for this data shall be the higher education staff information form required biennially from all institutions of higher education by the Federal Equal Employment Opportunity Commission, the collection of which is coordinated by the California Postsecondary Education Commission.

a. The higher education staff information form includes all the following types of data:

   1. The number of full-time employees by job categories, ethnicity, sex, and salary ranges.
   2. The number of full-time faculty by ethnicity, sex, rank, and tenure.
   3. The number of part-time employees by job categories (including tenured, nontenured or tenure track, and other nontenured academic employees), ethnicity, and sex.
   4. The number of full-time new hires by job categories (including tenured, nontenured or tenure track, and other nontenured academic employees), ethnicity, and sex.

b. In addition to the above, the segments shall submit to the commission all the following:

   1. Promotion and separation data for faculty and staff employees by ethnicity and sex for each of the two-year time periods beginning with 1977 to 1979.
   2. Narrative evaluation examining patterns of underutilization of women and minority employees among different job categories compared with the availability of qualified women and minorities for different job categories.

3. Narrative evaluation examining specific results of affirmative action programs in reducing underutilization of women and minorities.
4. Narrative evaluation of both strengths and inadequacies of current affirmative action programs, including inadequacies resulting from budgetary constraints.

c. For purposes of this section, minorities and ethnic minorities shall include those persons defined as such by rules and regulations of the Federal Equal Employment Opportunity Commission.

This section shall remain in effect until January 1, 1991, and as of that date is repealed.

66903.2 The commission shall issue a Health Sciences Education Plan which shall take into account the Health Manpower Plan issued by the Office of Statewide Health Planning and Development pursuant to Section 429.96 of the Health and Safety Code.

66903.4 The Health Sciences Education Plan shall consist of at least the following elements:

a. A finding, taking into account the findings of the Health Manpower Plan issued by the Office of Statewide Health Planning and Development, as to whether health sciences education enrollment levels are adequate to meet the needs in California for health personnel, by category and specialty within each category.

b. A finding as to the extent to which the sites of health sciences training programs make maximum available use of existing clinical and classroom resources throughout the state.

c. Recommendations concerning the establishment of new programs or the elimination of existing programs in health sciences according to findings in subdivisions (a) and (b).

66903.5 Pursuant to subdivision (4) of Section 66903, the commission shall participate in appropriate stages of the executive and legislative budget processes, as requested by the executive and legislative branches, to advise regarding the representation of women and minority employees at institutions of higher education. All information generated by the institutions and collected by the commission pursuant to Section 66903.1 shall be available to the public. This section shall remain in effect until January 1, 1985, and as of that date is repealed.

66903.6 The commission shall issue an updated Health Sciences Education Plan and recommendations to the Legislature and the Governor on or before

March 1, 1978, and on or before March 1 of every even-numbered calendar year thereafter.

66904. It is the intent of the Legislature that sites for new institutions or branches of the University of California and the California State University, and the classes of off-campus centers as the commission shall determine, shall not be authorized or acquired unless recommended by the commission.

It is further the intent of the Legislature that California community colleges shall not receive state funds for acquisition of sites or construction of new institutions, branches, or off-campus centers unless recommended by the commission. Acquisition or construction of non-state-funded community college institutions, branches, off-campus centers, and proposals for acquisition or construction shall be reported to and may be reviewed and commented upon by the commission.

It is further the intent of the Legislature that existing or new institutions of public education, other than those described in subdivisions (b) and (c) of Section 66010, shall not be authorized to offer instruction beyond the 14th grade level.

All proposals for new postsecondary educational programs shall be forwarded to the commission for review together with such supporting materials and documents as the commission may specify. The commission shall review the proposals within a reasonable length of time, which time shall not exceed 60 days following submission of the program and the specified materials and documents. For the purposes of this section, "new postsecondary education programs" means all proposals for new schools or colleges, all series of courses arranged in a scope or sequence leading to (1) a graduate or undergraduate degree, or (2) a certificate of a type defined by the commission, which have not appeared in a segment's or district's academic plan within the previous two years, and all proposals for new research institutes or centers which have not appeared in a segment's or district's academic plan within the previous two years.

It is further the intent of the Legislature that the advice of the commission be utilized in reaching decisions on requests for funding new and continuing graduate and professional programs, enrollment levels, and capital outlay for existing and new campuses, colleges, and off-campus centers.

66905. It is the intent of the Legislature that the California Postsecondary Education Commission annually review and fix the salary of its director according to a methodology established by the commission. This methodology shall take into consideration the salary of directors of coordinating boards for higher education in states with postsecondary education systems comparable to California's in size, complexity, and level of state expenditures. The comparison states shall include seven major industrial states, including Illinois, New Jersey, New York, Ohio, and Texas. The commission shall notify the Chairperson of the Joint Legislative Budget Committee of this annual salary amount. Notwithstanding the provisions of Section 19825 of the Government Code, the salary shall become effective no sooner than 30 days after written notice of the salary is provided to the chairperson of the committee, or no sooner than a lesser time as the chairperson, or his or her designee, may determine.

66906. Each member of the commission shall receive a stipend of one hundred dollars ($100) for each day in which he or she attends any meeting of the commission or any meeting of any committee or subcommittee of the commission, of which committee or subcommittee he or she is a member, and which committee or subcommittee meeting is conducted for the purpose of carrying out the powers and duties of the commission and, in addition, shall receive his or her actual and necessary traveling expenses incurred in the course of his or her duties.

66907. Initial appointments to the California Postsecondary Education Commission shall become effective on January 10, 1974. All subsequent terms will begin on January 1 of the year in which the respective terms are to start.

Responsibilities heretofore assigned to the Coordinating Council for Higher Education through legislative resolution and budget language shall be assumed by the commission on April 1, 1974. All ongoing projects, information, and files of the council shall be transferred to the commission on that date.

Federal Assistance for Higher Education

67000. The people of the State of California accept the provisions of and each of the funds provided by Title I and Title X of the Education Amendments of 1972 (Public Law 92-318), the Education Amendments of 1976 (Public Law 94-482), and subsequent enactments amendatory or supplementary thereto.

67001. In accepting the benefits of the act of Congress, the people of the state agree to comply with all of the provisions and to observe all of its requirements.

67002. The California Postsecondary Education Commission is designated as the state educational agency to carry out the purposes and provisions of the Education Amendments of 1972 (Public Law 92-318), the Education Amendments of 1976 (Public Law 94-482), and subsequent enactments amendatory or supplementary thereto, as follows:

a. The commission is designated as the state commission required to be established pursuant to Section 1202 of Title X of the Higher Education Act of 1965 (Public Law 89-329) as amended by the Education Amendments of 1972 (Public Law 92-318);

b. The commission is designated as the state administrative agency required to be established pursuant to Section 1055 of Title X of the Higher Education Act of 1965 (Public Law 89-329) as amended by the Education Amendments of 1972 (Public Law 92-318), unless such designation is determined by the federal government to be in conflict with federal law or regulations;

c. The commission is designated as the state administrative agency required to be established pursuant to Section 105 of Title I, Section 122 of Title III, Section 603 of Title VI and Section 704 of Title VII of the Higher Education Act of 1965 (Public Law 89-329) as amended by the Education Amendments of 1972 (Public Law 92-318). The California Postsecondary Education Commission is hereby vested with authority to prepare and submit to the United States Commissioner of Education any state plan required by said act of Congress, to prepare and submit amendments to such state plans, and to administer such state plans or amendments thereto, in accordance with said act of Congress and any rules and regulations adopted thereunder. Any such state plan or amendment thereto prepared by the California Postsecondary Education Commission shall be subject to the approval of the Department of Finance to the extent required by Section 13326 of the Government Code. The California Postsecondary Education Commission is hereby vested with all necessary power and authority to cooperate with the government of the United States, or any agency or agencies thereof in the administration of the act of Congress and the rules and regulations adopted thereunder.

67003. The Trustees of the California State University and Colleges on behalf of the California State University and Colleges, the Regents of the University of California on behalf of the university, the Board of Governors of the California Community Colleges on behalf of the community colleges and the Board of Governors of the California Maritime Academy on behalf of the California Maritime Academy, are vested with all power and authority to perform all acts necessary to receive the benefits and to expend the funds provided by the act of Congress described in Section 67000 and with all necessary power and authority to cooperate with the government of the United States, or any agency or agencies thereof, and with the California Postsecondary Education Commission for the purpose of receiving the benefits and expending the funds provided by the act of Congress, in accordance with the act, or any rules or regulations adopted thereunder, or any state plan or rules or regulations of the California Postsecondary Education Commission adopted in accordance with the act of Congress. Whenever necessary to secure the full benefits of the act of Congress for loans or grants for academic facilities, the trustees, regents, or boards of governors may give any required security and may be required and may comply with any conditions imposed by the federal government.

67004. The State Treasurer is designated as the custodian of all funds received by the state from the government of the United States, or of any agency or agencies thereof, under the federal act and he is authorized to receive and provide for the custody of all moneys so received.

67005. The funds received by the state under the provisions of the act shall be paid out by the State Treasurer on warrants drawn by the Controller and requisitioned by the California Postsecondary Education Commission in carrying out the purposes of the federal act.

67006. The office of the Governor is designated as the state educational agency to carry out the purposes and the provisions of Section 802 of Title VIII of the Housing Act of 1964.

The office of the Governor is hereby vested with authority to prepare and submit any state plan required by said section of said act of Congress, to prepare and submit amendments to such state plan, and to administer such state plan or amendments thereto, in accordance with said act of Congress, and any rules and regulations adopted thereunder. Any such state plan or amendment thereto prepared by the office of the Governor shall be subject to the approval of the Department of Finance.

The office of the Governor is hereby vested with all necessary power and authority to cooperate with the government of the United States, or any agency or agencies thereof in the administration of the act of Congress and the rules and regulations adopted thereunder.

67007. The State Board of Education is vested with all necessary power and authority to perform all acts necessary to authorize governing boards of districts maintaining community colleges to receive the benefits and to expend the funds provided by any acts of Congress under which districts maintaining community colleges may be eligible to receive benefits, including, but not limited to, Title VII of the Housing Act of 1961 (Public Law 87-70), as amended, and any of the acts of Congress referred to in this chapter. The board is vested with all necessary power and authority to authorize districts maintaining community colleges to cooperate with the government of the United States, or any agency or agencies thereof, for the purpose of receiving the benefits and expending the funds provided by said acts of Congress, or any rules or regulations adopted thereunder, or any state plan or rules or regulations of the California Postsecondary Education Commission adopted in accordance with any of said acts of Congress under which the California Postsecondary Education Commission is designated in this chapter as the state educational agency. Whenever necessary to secure the full benefits of said acts of Congress, the governing board may give such security as may be required and may comply with such conditions as may be imposed by the federal government. The funds received by the district under the provisions of said acts of Congress shall be deposited in the county treasury as provided for in Section 84001.

This section shall be applicable to only those acts of Congress which have been enacted prior to January 1, 1967.

Appendix D Ethnicity Reporting Problems

OF all of the information developed, collected, and reported by a campus in the course of an academic year, student ethnicity data undoubtedly present the most difficult challenges. (Definitions of the ethnic categories used in California may be found in the Glossary on pp. 181-186.) Problems in collecting student ethnicity fall into five basic areas:

1. **Errors inherent in the self-reporting process**

   By law, student ethnicity must be self-reported; that is, students must voluntarily indicate the ethnic group with which they identify. While both federal and state law give administrators limited authority to intervene in the ethnicity declaration process, campus officials are, for the most part, precluded from influencing students' choice of their ethnic category.

2. **Errors induced by failure to report**

   Although the federal government exhorts educational institutions to report the ethnicity of their students, campus officials have few mechanisms by which to force recalcitrant students to declare their ethnicity. Many students, through intent or neglect, take advantage of this condition and fail to declare their ethnicity when the opportunity is afforded them.

3. **Inability to verify the accuracy of the information collected**

   While self-reporting has clear and obvious benefits in terms of ensuring the confidentiality of personal information, it impedes an institution's ability to verify the accuracy or appropriateness of such information. In general, student declarations of ethnicity are private matters maintained in confidential files. As such, ethnicity declarations are rarely subject to review to ensure their accuracy.

4. **Changes in reporting categories**

   Reporting categories have been modified by the federal government a number of times over the past few years and some student ethnicity designations submitted in prior years and not recollected in the interim are no longer valid. Further, some of the changes introduced by the federal government have proven difficult to interpret by both administrators and students -- a condition further complicating the problems involved in the collection of student ethnicity data.

5. Administrative error

Finally, many institutions solicit student ethnicity declarations as part of their first-time admission or first day of registration procedures. From both the students' and the institutions' standpoint such efforts could probably not come at a more untimely moment. At this time, many students and administrators are concerned with ensuring that students have, enrolled in the proper classes, paid the appropriate fees, received proper student financial assistance, and familiarized themselves with the local campus geography. Amidst such obvious turmoil, administrative procedures often fail, and student ethnicity declarations are either unsolicited or lost.

Nonetheless, while it is clear that collecting and reporting accurate student ethnicity is a difficult task, most campuses do a good job of informing students of the need to know their ethnicity and accurately recording their responses.

Appendix E Principles for Community College Finance

Note: These principles are reproduced from pages 31-33 of *Principles for Community College Finance*, adopted by the Commission on March 21, 1983.

Financing for the California Community Colleges should:

- Promote statewide goals of access to postsecondary education, quality of college instruction and support services, and efficient use of college resources;
- Maintain the comprehensive mission of the Community Colleges and reflect statewide and local priorities for funding;
- Recognize the shared State and local responsibility for governance of the Community Colleges;
- Promote local decision making in the management of college resources;
- Provide adequate levels of support from a variety of revenue sources; and
- Provide finance mechanisms that: (1) are stable over time and predictable in their allocation of resources; (2) relate levels of support to the costs of college operations; and (3) are equitable among districts.

Sources of support

Support for Community College education should continue to come from a variety of sources, including federal, State and local tax revenues, student fees, and contributions from business and labor.

- The State should maintain responsibility for providing adequate funding of the Community Colleges.
- Property tax revenues should continue to support general apportionments.
- Additional local revenue sources, such as local sales or income taxes, should be authorized for support of local education needs which are not being met by State funding.

- Contract agreements with business and labor should support Community College instruction in highly specific training programs designed to help particular firms.
- Student fee support for State-funded programs should be kept as low as possible. Increases in student fees should be indexed to the prior three-year average of increases in State funding for the colleges, with annual caps of plus or minus 10 percent. Increases in student fees should be accompanied by increases in State financial aid to the Community Colleges.

Levels of support

Levels of support for systemwide general apportionments and categorical programs should be:

- Determined each year by the Legislature and Governor in the budget process;
- Adequate to fund the costs of inflation as well as planned workload and program changes; and
- Sufficient to provide an adequate level of district resources for cash flow, contingency, capital outlay, maintenance, and other required future obligations.

Relation to costs

Financing mechanisms should relate support for college operations to expected costs, yet not restrict expenditure patterns, by providing:

- Differential funding based on a limited number of major instruction and support activity categories that most accurately reflect differences in the costs of Community College operations;
- Workload measures for each cost category that: (1) best relate to changes in the costs of providing the activity; (2) provide incentives consistent with stated goals and objectives for college operations; and (3) avoid undue collection and verification costs;
- Support rates that reflect demonstrated differences in costs; and
- Funding for workload change at an incremental or marginal rate that accurately reflects the variable, rather than the fixed, costs of such changes and provides adequate support for districts experiencing substantial growth.

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Stability

Financing mechanisms should provide stability in the support of college operations by providing:

- Five-year legislative authorization for the basic support mechanisms;
- Phase-in of equity adjustments to district base revenues if significant budget disruptions are faced by local districts;
- Use of a base year funding level with adjustments for inflation and workload to determine budget year allocations;
- An established range in which actual workload may fall below budgeted levels without changes in district revenue; and
- Increased district flexibility to maintain support levels in constant dollars in the event that revenues are insufficient to fund necessary inflation and workload.

Equity

Financing mechanisms should promote equity among districts by providing:

- Equitable levels of support based on differential funding;
- Elimination of differences in districts; revenues that are the result of demonstrated past inequities in district wealth, tax support, or funding mechanisms; and
- Support mechanisms that are designed to be generally applicable to all districts.

Glossary

Academic ladder: The tenure-track ranks from assistant professor to associate professor to full professor.

Appropriation: An amount (other than a grant or contract) received from or made available to an institution through an act of a legislative body.

Assistant professor: A junior faculty tenure-track position.

Associate degree: A degree granted for the successful completion of a subbaccalaureate program of studies, usually requiring at least two years (or equivalent) of full-time college-level study. This includes degrees granted in a cooperative or work/study program.

Associate professor: A senior faculty tenured position.

Average daily attendance (ADA): The aggregate attendance of a school during a reporting period (normally a school year) divided by the number of days school is in session during this period. Only days on which the pupils are under the guidance and direction of teachers are considered days in session.

Bachelor's degree: A degree granted for the successful completion of a baccalaureate program of studies, usually requiring at least four years (or equivalent) of full-time college-level study. This includes degrees granted in a cooperative or work/study program.

Cohort: A group of individuals who have a statistical factor in common, for example, year of birth.

College: A postsecondary school that offers general or liberal arts education, usually leading to an associate, bachelor's, master's, doctor's, or first-professional degree. Junior colleges and community colleges are included under this terminology.

Educational attainment: The highest grade of regular school attended and completed.

Note: Many of these definitions are reproduced from pp. 343-354 of *Digest of Education Statistics 1987* of the Center for Education Statistics, United States Department of Education.

Enrollment: The total number of students registered in a given school unit at a given time, generally in the fall of a year.

Expenditures: Charges incurred, whether paid or unpaid, which are presumed to benefit the current fiscal year. For elementary/secondary schools, these include all charges for current outlays plus capital outlays and interest on school debt. For institutions of higher education, these include current outlays plus capital outlays. For government, these include charges net of recoveries and other correcting transactions other than for retirement of debt, investment in securities, extension of credit, or as agency transaction. Government expenditures include only external transactions, such as the provision of perquisites or other payments in kind. Aggregates for groups of governments exclude intergovernmental transactions among the governments.

First-professional degree: A degree that signifies both completion of the academic requirements for beginning practice in a given profession and a level of professional skill beyond that normally required for a bachelor's degree. This degree usually is based on a program requiring at least two academic years of work prior to entrance and a total of at least six academic years of work to complete the degree program, including both prior-required college work and the professional program itself. By Center for Education Statistics definition, first-professional degrees are awarded in the fields of dentistry (DDS or DMD), medicine (MD), optometry (OD), osteopathic medicine (DO), pharmacy (DPhar.), podiatric medicine (DPM), veterinary medicine (DVM), chiropractic (DC or DCM), law (JD), and theological professions (MDiv. or MHL).

Full professor: A senior faculty tenured position.

Full-time-equivalent (FTE) enrollment: For institutions of higher education, enrollment of full-time students, plus the full-time equivalent of part-time students as reported by institutions. In the absence of an equivalent reported by an institution, the FTE enrollment is estimated by adding one-third of part-time enrollment to full-time enrollment.

Graduate: An individual who has received formal recognition for the successful completion of a prescribed program of studies.

Gross national product (GNP): The total national output of goods and services valued at market prices. GNP can be viewed in terms of expenditure categories that include purchases of goods and services by consumers and government, gross private domestic investment, and net exports of goods and services. The goods and services included are largely those bought for final use (excluding illegal transactions) in the market economy. A number of inclusions, however, represent imputed values, the most important of which is rental value or owner-occupied housing. GNP, in this broad context, measures the output attributable to the factors of production -- labor and property -- supplied by U.S. residents.

Higher education: Study beyond secondary school at an institution that offers programs terminating in an associate, baccalaureate, or higher degree.

Higher education institutions (traditional classification):

Four-year institution: An institution legally authorized to offer and offering at least a four-year program of college-level studies wholly or principally creditable toward a baccalaureate degree. In some tables a further division between universities and other four-year institutions is made. A "university" is a postsecondary institution which typically comprises one or more graduate professional schools (also see *University*). "Other four-year institutions" include the rest of the nonuniversity four-year institutions.

Two-year institution: An institution legally authorized to offer and offering at least a two-year program of college-level studies which terminates in an associate degree or is principally creditable toward a baccalaureate degree.

Instructor: A non-tenure track teaching or research position that is not on the academic ladder and that does not lead to a tenured position; this is often a part-time position.

Junior faculty: A tenure-track position which corresponds to the rank of assistant professor.

Lecturer: A non-tenure track teaching or research position that is not on the academic ladder and that does not lead to a tenured position; this is often a part-time position (although there are some senior lecturer positions which do in special instances guarantee security of employment).

Master's degree: A degree awarded for successful completion of a program generally requiring one or two years of full-time college-level study beyond the bachelor's degree. One type of master's degree including the Master of Arts degree, or M.A., and the Master of Science degree, or M.S., is awarded in the liberal arts and sciences for advanced scholarship in a subject field or discipline and demonstrated ability to perform scholarly research. A second type of master's degree is awarded for the completion of a professionally oriented program, for example, an M.Ed. in education, an M.B.A. in business administration, an M.F.A. in fine arts, an M.M. in music, an M.S.W. in social work, and an M.P.A. in public administration. A third type of master's degree is awarded in professional fields for study beyond the first-professional degree, for example, the Master of Laws (LL.M.) and Master of Science in various medical specializations.

Non-tenure track positions: Teaching and research positions, such as lecturer, instructor, or research associate, which are not on the academic ladder and which do not lead to a tenured position; these are often part-time positions (although there are some senior lecturer positions which do in special instances guarantee security of employment).

Postbaccalaureate enrollment: The number of graduate and first-professional students working towards advanced degrees and of students enrolled in graduate-level classes but not enrolled in degree programs. See also *graduate enrollment* and *first-professional enrollment*.

Proprietary institution: An educational institution that is under private control but whose profits derive from revenues subject to taxation.

Racial/ethnic group: Classification indicating general racial or ethnic heritage based on self-identification, as in data collected by the Bureau of the Census or on observer identification, as in data collected by the Office of Civil Rights. These categories are in accordance with the federal Office of Management and Budget standard classification scheme presented below:

White: A person having origins in any of the original peoples of Europe, North Africa, or the Middle East. Normally excludes persons of Hispanic origin except for tabulations produced by the Bureau of the Census, which are noted accordingly in this volume.

Black: A person having origins in any of the black racial groups in Africa. Normally excludes persons of Hispanic origin except for tabulations produced by the Bureau of the Census, which are noted accordingly in this volume.

Hispanic: A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

Asian or Pacific Islander: A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes, for example, China, India, Japan, Korea, the Philippine Islands, and Samoa.

American Indian or Alaskan Native: A person having origins in any of the original peoples of North America and maintaining cultural identification through tribal affiliation or community recognition.

Remedial education: Instruction for a student lacking those reading, writing, or math skills necessary to perform college-level work at the level required by the attended institution.

Research associate: A non-tenure track teaching or research position that is not on the academic ladder and that does not lead to a tenured position; this is often a part-time position.

Scholastic Aptitude Test (SAT): An examination administered by the Educational Testing Service and used to predict the facility with which an individual will progress in learning college-level academic subjects.

Senior faculty: A tenured position which corresponds to the ranks of associate and full professor.

Socioeconomic status (SES): A measure of social class standing in America, sometimes derived for statistical purposes from five components: father's education, mother's education, family income, father's occupation, and household characteristics. The terms *high, middle,* and *low* SES refer to the upper, middle, and lower classes.

Tenure: A position that is guaranteed employment.

Tenure-track positions: Positions -- somewhat like apprenticeships -- which lead to tenured positions, after about seven years, if the candidate is found worthy by peers and colleagues.

Transcript: An official list of all courses taken by a student at a school or college showing the final grade received for each course, with definitions of the various grades given at the institution.

Tuition and fees: A payment or charge for instruction or compensation for services, privileges, or the use of equipment, books, or other goods.

Undergraduate students: Students registered at an institution of higher education who are working in a program leading to a baccalaureate degree or other formal award below the baccalaureate such as an associate degree.

University: An institution of higher education consisting of a liberal arts college, a diverse graduate program, and usually two or more professional schools or faculties and empowered to confer degrees in various fields of study. For purposes of maintaining trend data in this publication, the selection of university institutions has not been revised since 1982.

Vocational education: A program of studies designed to prepare students for employment in one or more semiskilled, skilled, or technical occupations.

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CALIFORNIA POSTSECONDARY EDUCATION COMMISSION

THE California Postsecondary Education Commission is a citizen board established in 1974 by the Legislature and Governor to coordinate the efforts of California's colleges and universities and to provide independent, non-partisan policy analysis and recommendations to the Governor and Legislature.

Members of the Commission

The Commission consists of 15 members. Nine represent the general public, with three each appointed for six-year terms by the Governor, the Senate Rules Committee, and the Speaker of the Assembly. The other six represent the major segments of postsecondary education in California.

As of January 1988, the Commissioners representing the general public are:

Mim Andelson, Los Angeles
C. Thomas Dean, Long Beach, *Chairperson*
Henry Der, San Francisco
Seymour M. Farber, M.D., San Francisco
Lowell J. Paige, El Macero
Cruz Reynoso, Los Angeles, *Vice Chairperson*
Sharon N. Skog, Palo Alto
Thomas E. Stang, Los Angeles
Stephen P. Teale, M.D., Modesto

Representatives of the segments are:

Yori Wada, San Francisco; appointed by the Regents of the University of California

Claudia H. Hampton, Los Angeles; appointed by the Trustees of the California State University

Borgny Baird, Long Beach; appointed by the Board of Governors of the California Community Colleges

Harry Wugalter, Thousand Oaks; appointed by the Council for Private Postsecondary Educational Institutions

Kenneth L. Peters, Tarzana; appointed by the California State Board of Education

James B. Jamieson, San Luis Obispo; appointed by California's independent colleges and universities

Functions of the Commission

The Commission is charged by the Legislature and Governor to "assure the effective utilization of public postsecondary education resources, thereby eliminating waste and unnecessary duplication, and to promote diversity, innovation, and responsiveness to student and societal needs."

To this end, the Commission conducts independent reviews of matters affecting the 2,600 institutions of postsecondary education in California, including Community Colleges, four-year colleges, universities, and professional and occupational schools.

As an advisory planning and coordinating body, the Commission does not administer or govern any institutions, nor does it approve, authorize, or accredit any of them. Instead, it cooperates with other state agencies and non-governmental groups that perform these functions, while operating as an independent board with its own staff and its own specific duties of evaluation, coordination, and planning,

Operation of the Commission

The Commission holds regular meetings throughout the year at which it debates and takes action on staff studies and takes positions on proposed legislation affecting education beyond the high school in California. By law, the Commission's meetings are open to the public. Requests to address the Commission may be made by writing the Commission in advance or by submitting a request prior to the start of a meeting.

The Commission's day-to-day work is carried out by its staff in Sacramento, under the guidance of its executive director, William H. Pickens, who is appointed by the Commission.

The Commission publishes and distributes without charge some 40 to 50 reports each year on major issues confronting California postsecondary education. Recent reports are listed on the back cover.

Further information about the Commission, its meetings, its staff, and its publications may be obtained from the Commission offices at 1020 Twelfth Street, Third Floor, Sacramento, CA 98514; telephone (916) 445-7933.

PREPARING FOR THE TWENTY-FIRST CENTURY

A Report on Higher Education in California by Clive P. Condren

California Postsecondary Education Commission Report 88-1

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87-40 Final Approval of San Diego State University's Proposal to Construct a North County Center: A Report to the Governor and Legislature Supplementing the Commission's February 1987 Conditional Approval of the Center (November 1987)

87-41 Strengthening Transfer and Articulation Policies and Practices in California's Colleges and Universities: Progress Since 1985 and Suggestions for the Future (November 1987)

87-42 Faculty Development from a State Perspective: A Staff Report to the California Postsecondary Education Commission in Response to Supplementary Language in the 1986 Budget Act (November 1987)

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87-45 Comments and Recommendations on *The Consortium of the California State University: A Report*: A Response to Supplemental Language in the 1987 Budget Act Regarding the Closure of the Consortium (December 1987)

87-46 Developments in Community College Finance: A Staff Report to the California Postsecondary Education Commission (December 1987)

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87-49 Education Offered via Telecommunications: Trends, Issues, and State-Level Problems in Instructional Technology for Colleges and Universities (December 1987)

87-50 California Postsecondary Education Commission News, Number 3 [The third issue of the Commission's periodic newsletter] (December 1987)

88-1 Preparing for the Twenty-First Century: A Report on Higher Education in California, Requested by the Organization for Economic Cooperation and Development and Written by Clive P. Condren (2/88)

88-2 Legislative Priorities of the Commission, 1988: A Report of the California Postsecondary Education Commission (2/88)

88-3 The 1988-89 Governor's Budget: A Staff Report to the California Postsecondary Education Commission (2/88)

88-4 Budgeting Faculty Instructional Resources in the University of California: A Report to the Legislature in Response to Supplemental Language in the 1987-88 Budget Act (2/88)

88-5 The Appropriations Limit and Education: Report of the Executive Director to the California Postsecondary Education Commission, February 8, 1988 (2/88)

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